Appendix 39

Meadowbank and Whale Tail
2024 Wildlife Monitoring Summary Report

REPORT

Agnico Eagle Mines Limited - Meadowbank Complex

2024 Wildlife Monitoring Summary Report

Submitted to:

Agnico Eagle Mines Limited

Submitted by:

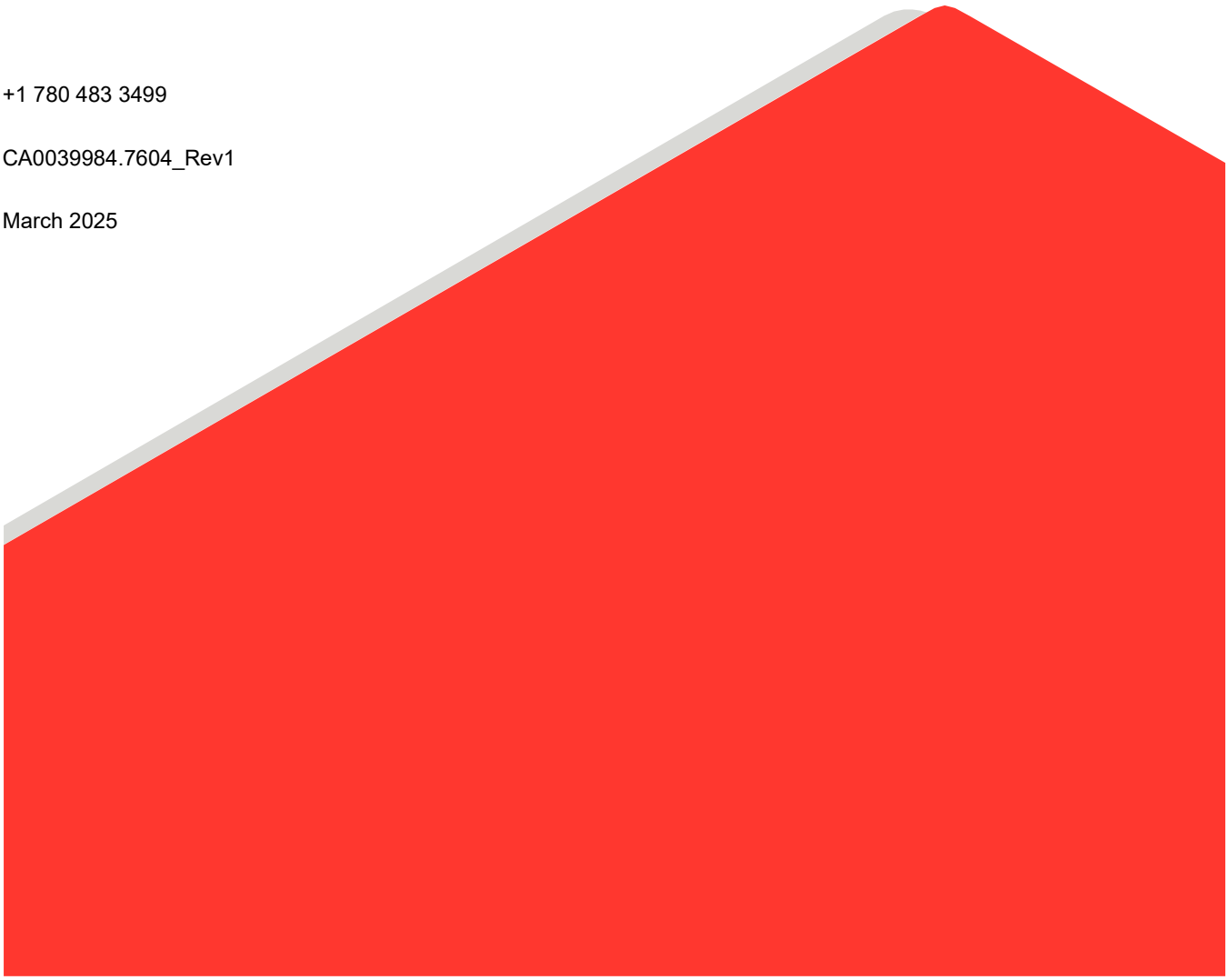
WSP Canada Inc.

16820 107 Avenue, Edmonton, Alberta, T5P 4C5 Canada

+1 780 483 3499

CA0039984.7604_Rev1

March 2025



Distribution List

1 Electronic Copy - Agnico Eagle Mines Limited

1 Electronic Copy - WSP Canada Inc.

Executive Summary

As a requirement of the NIRB Project Certificate, the 2024 Wildlife Monitoring Summary Report (2024 Annual Report) represents the 19th of a series of annual reports for the Agnico Eagle Mines Limited (Agnico Eagle) Meadowbank Complex (the Project). Baseline and monitoring programs were first initiated in 1999 and will continue through the life of the Project. Details of the wildlife monitoring program for the Project are provided in the Terrestrial Ecosystem Management Plan (Version 7, Agnico Eagle 2019). The 2024 Annual Report provides the monitoring objectives, methodology, historical and current year results, mitigation activities, and management recommendations for each monitoring program. The 2024 Annual Report builds on data presented in previous reports and incorporates monitoring recommendations from these reports, as well as recommendations and requests from intervenors on past reports made during the NIRB review process. Below is a summary of the results from each component of the 2024 Annual Report.

Caribou Management Decision Tree

- Decision trees were used throughout 2024 to reduce sensory disturbances to caribou approaching the Project. Wildlife observations should continue to be documented using approaches implemented in 2024.
- Data collection methods connected individual observations to mitigations using field tablets linked to a customizable EQuIS Collect database. Paper data forms were also carried as backup in case of field tablet issues. Most mitigations were based on data from road survey observations, with some derived from other survey types, including pit and mine site ground surveys.
- The objective is not linked to an impact prediction as the monitoring is to trigger mitigation rather than to test a prediction.

Road Surveys

- In 2024, 277 road surveys were conducted along the All-weather Access Road (AWAR) and 194 were conducted along the Whale Tail Haul Road (WTHR).
- A total of 40,161 caribou were detected along the AWAR during road surveys and 16,007 caribou were detected along the WTHR during road surveys.
- Road-related monitoring and mitigation for the AWAR and WTHR were implemented according to decision tree Figures 7 and 8 of the TEMP version 7 (Agnico Eagle 2019). The AWAR was fully closed (24-hour closure) on 63 days, closed for less than 24 hours on 81 occasions, including 38 closure days due to caribou, and had speed restrictions applied for 83 days. In total the AWAR was closed for 2,396 hours. The WTHR was fully closed (24-hour closure) on 24 days, partially closed (less than 24-hour closure) on 40 days and had speed restrictions applied for 77 days. The WTHR was closed for 888 hours in 2024. In addition to the GST related caribou closures, there was also a lead caribou 10-day closure for both the AWAR and WTHR.
- A total of 9,243 caribou were observed crossing the AWAR and 2,468 caribou were observed crossing the WTHR in 2024.
- There were 30 road-related mortalities recorded in 2024, including 7 Arctic fox, 5 Arctic hare, 11 Arctic ground squirrel and 5 Ptarmigan. There was one caribou road-related mortality that took place on the AWAR on 05 January 2024, and one wolverine road-related mortality that took place on WTHR on 16 November 2024.

There were no road-related grizzly bear, muskox, or wolf mortalities associated with the AWAR or WTHR in 2024.

- The 2024 AWAR and WTHR survey data were compared to the impact prediction thresholds, and none were exceeded in 2024.

Pit and Mine Site Ground Surveys

- In 2024, environment personnel conducted regular Mine site inspections focusing on waste management, spills, hazardous waste management, and wildlife monitoring. Formal Mine site inspections were carried out at least weekly as part of broader environmental on-site management.
- In 2024, Mine-site ground survey inspections were conducted on average once or twice per week. Meadowbank had a total of 86 formal Mine and Pit surveys conducted between 14 January and 30 December (approximately one survey every 4.24 days). Whale Tail had a total of 87 formal Mine and Pit surveys conducted between 6 January and 28 December (approximately one survey every 4.20 days).
- Wildlife deterrents were used on 25 occasions in 2024, with interactions from four species of mammals: caribou, grizzly bear, wolf, and wolverine. Of the 25 deterrence actions taken, 22 were classified as successful deterrence and 3 were classified as unsuccessful deterrence.
- There were six Project-related mortalities (long-tailed duck) in 2024 at Meadowbank, and one Project-related mortality (Arctic fox) at the Whale Tail Mine.
- Mitigation implemented in 2024, and previous years continues to be effective at minimizing Project-related injuries and mortalities.

Wildlife Habitat Monitoring

- A 9.0% change (69 ha) in footprint at the Whale Tail site and WTHR occurred between the 2021 assessment and the 2024 assessment. For the AWAR, an increase in size of 2% (4.52 ha) was observed between 2021 and 2024. The changes in footprint since the previous assessment were less than 25%. Therefore, a comprehensive habitat loss assessment was not required prior to the 2024 scheduled assessment.
- Habitat loss thresholds were not exceeded in 2024. The next comprehensive habitat analysis will be completed in 2027 as it will be 3 years following this report.

Caribou Satellite-Collaring Program

- Caribou collar data from 2024 were examined and maps prepared. Agnico Eagle intends to continue collaboration with the Government of Nunavut Department of Environment (GN DoE) caribou satellite-collaring program.
- In 2024, thirteen individuals from 3 different herds (Ahiak, Lorillard, and Wager Bay) had collar fixes within the Project (Regional Study Area (RSA). Only 2 collared caribou interacted with the RSA during spring and summer.
- There are no specific impact predictions for caribou migration movements. Flexible and responsive mitigation measures such as the TEMP decision trees are likely to continue to be the most effective due to seasonal and yearly variability in movement patterns at the RSA scale.

Viewshed Surveys

- Thirteen viewshed locations were surveyed on 99 dates in 2024, though not all locations were surveyed everyday.
- A total of 1,467 viewshed surveys were conducted between 1 January and 31 December, with the highest survey effort occurring in the fall (34.5%). Of the viewshed surveys completed in 2024, 82 surveys (6%) had caribou sightings, and a total of 1,945 caribou were recorded.
- Based on discussion from the fall 2024 Terrestrial Advisory Group (TAG) meeting (meeting #21, Agnico Eagle 2024d), viewshed surveys will be discontinued going forward and will not be conducted in 2025.

Remote Camera Program

- Artificial intelligence was used to pre-sort wildlife images from remote cameras on the WTHR in 2024. Photographs flagged as containing wildlife by artificial intelligence were reviewed by a human observer.
- Caribou were detected in all seasons, and caribou crossing events were detected in spring, summer, and fall. Crossing events were recorded on six out of ten cameras.
- More crossing events were observed on days with an open road status (n = 38) compared to days with a road closure (n = 28). Too few crossing events were detected to statistically compare crossing rates between different road heights, backfill materials, and backfill slopes.

Blast Monitoring

- Surveys for caribou behaviour monitoring prior to and during blasting were performed in 2024. Caribou behavior was quantified before, during and after blasting and average response behaviours six minutes following blasting was assessed in relation to peak particle velocity (PPV) and peak pressure level (PPL) values. No blasts were cancelled due to caribou presence in the vicinity.
- In 2024, two blast measures exceeded the PPV annoyance threshold of 5 mm/s and no blast measures exceeded 12.5 mm/s threshold. No blasts resulted in PPL values above the 128 dBL damage threshold and 11 blasts resulted in PPL values below the 115 dBL annoyance threshold at 569 m from the blast site location.
- In 2024, caribou made no notable responses to blasting despite being within 1 km of the highest PPV and PPL values for any year of monitoring. There were 203 pre-blast surveys were performed over 176 days, however, only three viable behavioral assessments could be obtained.
- Due to the challenges in aligning blasting events, caribou availability and visible behaviour responses, data collection may need to continue. However, the lack of caribou near blast areas and their lack of response to blasting may already provide enough evidence of the low impact of blasting events on caribou.
- The results to date support that distance thresholds for suspending blasting can be reduced to less than current 3 km threshold as no strong adverse responses have been observed at distances less than 3 km.

Hunter Harvest Study

- The Hunter Harvest Study (HHS) included 77 participants in 2024. A total of 820 caribou were reported as being harvested by 64 participants in the Baker Lake HHS.
- The 2024 HHS data indicated that 48% of reported harvest occurred within 5 km of the AWAR, and 82% occurred within the Meadowbank RSA.
- In 2024, no caribou were harvested within 5 km of the WTHR. Given the low numbers of reported harvests close to the WTHR and the prohibition of the public from the WTHR, it is unlikely that the presence of the road has resulted in increased harvest.

Predatory Mammal Den Monitoring

- Monitoring of predatory mammal dens were conducted informally in 2024 through observations recorded during other monitoring programs. Potential effects due to Project-related activities were not identified to trigger monitoring of predatory mammal dens. No predatory mammal dens were observed or monitored in 2024.
- If an active den is identified in close proximity to Project facilities, a den management plan is developed that outlines a monitoring schedule and appropriate mitigation strategies. No impacts to denning predators were observed in 2024.

Raptor Nest Monitoring

- Eight peregrine falcon nests were documented in Quarries 2, 3, 7, 9, 16, 18, 21, and 22 in 2024, and nests had previously been identified in these quarries.
- No raptor nesting evidence was observed in quarries along the WTHR in 2024 (Quarries 10.5, 17, 26, 30, 35, 50, and 52) No other raptor nests were identified during pit checks or incidentally during other surveys in 2024.
- Raptor nest management plans were not developed at the active nest sites, as Mine-related activity was already restricted within the quarries, with the only disturbance being traffic on the nearby AWAR.
- Results of the 2024 nest occupancy analysis did not indicate Project-related effects on rough-legged hawk and gyrfalcon occupancy. There has been a marginal decrease in peregrine falcon occupancy, but this cannot be strongly correlated to effects from the Project. These results may be biased by the number of nests in the quarry and better representation of nesting sites near or further away from the AWAR could provide more insight on Project effects.
- Agnico Eagle will continue to monitor raptor nests in accordance with the TEMP including annual raptor nest surveys of quarries along the AWAR, WTHR, pits, and waste rock piles; development of nest management plans; and implementation of the Peregrine Falcon Management and Protection Plan, when required. Active nests will continue to be monitored to determine the success of the nest.

Waterbird Nest Monitoring

- The Whale Tail expansion required the construction of two dykes within Whale Tail Lake to divert water from the proposed pit to surrounding lakes and tributaries, resulting in flooding that had potential impacts to migratory birds and their nests.
- Trent University, in collaboration with Environment and Climate Change Canada (ECCC) and Agnico Eagle, conducted a research study to investigate mitigation options to minimize flooding-related impacts to birds in the Whale Tail South area. The complete analysis and report on behavioural responses were included in Holmes (2022) with some aspects published in a scientific journal in 2024 (Holmes et al. 2024).

Breeding Bird Monitoring

- Agnico Eagle will continue to survey 48 PRISM plots selected by the ECCC over 10 years (2021 to 2031), and completion of AWAR and WTHR Breeding Bird Survey (BBS) routes opportunistically when qualified individuals are on site. At a minimum, these BBS routes will be conducted every three years during the operations, closure, and post-closure phases of the project.
- A total of 23 bird species were recorded on AWAR and 25 bird species were recorded on WTHR in 2024.
- There were 13 PRISM plots surveyed in 2024, and two BBS routes. The routes established in 2022 along the AWAR and WTHR consist of 50 stations set every 800 m and were surveyed in 2023 and 2024.
- It is recommended that PRISM plots and BBS routes be surveyed in June 2025. The remaining 13 PRISM plots should be completed prior to the Project closure and BBS routes surveyed within the committed three-year cycle.

Non-Native Plant Surveys

- No non-native plants, as identified by the CESCC, were recorded along the AWAR, WTHR, Baker Lake tank farm, Meadowbank Mine Site and Whale Tail sites during the 2024 field surveys.
- A total of 201 individual locations, which includes three new added locations in the AWAR quarry were surveyed for non-native plants in 2024. Eighteen surveys were completed in the undisturbed tundra around the Meadowbank Mine site, WTHR, and AWAR to survey the presence/absence of non-native species. No non-native plants were found in the undisturbed areas of the tundra that were surveyed.
- Efforts for non-native plant management, including identified non-endemic species, should continue and added diligence should be undertaken with regards to areas of high traffic from equipment. Continued and thorough cleaning of equipment and materials prior to entering the site, per the TEMP, will prevent seed of non-native species from being introduced.

Special Studies

Snow Study

- A total of nine surveys were completed during the spring migration of 2024. Of the nine survey locations, four were along the WTHR and five were along the AWAR. Surveys during 2024 took place during six days, including one day in February, one day in March, and four days in April.

- Average snow depth in use plots and snow-managed control plots (i.e., plots within the berm but not used by caribou) were similar, but snow depth was greater in non-managed control plots. Average snow hardness was similar between use plots, snow-managed control plots, and non-managed control plots. Mean track depth was similar between use plots compared to non-managed control plots.
- Improvements for data collection implemented in 2023 and carried forward into 2024 allowed for a full suite of snow data (snow depth, snow hardness, slope) and caribou track data (in used plots and non-managed control plots) to be collected for a total of 45 survey locations.
- A minimum of 20 survey locations should be surveyed in 2025 to collect the remaining data required for the snow study. Final analysis of snow study data is anticipated to occur in 2025 if target sample sizes are achieved, and final results will be presented in the 2025 TEMP report. However, current results are not on a trajectory to suggest large differences are present.

Caribou Behaviour

- Agnico Eagle continued a caribou behaviour study that focussed on measuring different behaviour activities of caribou in relation to Mine-related activities (Appendix J).

Road and Viewshed Comparison

- Following discussion with the TAG in November 2022, more viewshed surveys were completed in 2023 to improve sample sizes and allow for comparison between survey types. The analysis reported herein expands the previous comparison with data from 2024. In addition, an attempt was made to compare detection probabilities between viewshed and road surveys. However, the sample size was insufficient for this analysis due to time differences between the survey types and the number of matching collared caribou fixes.
- In 2024, there were 94 days in which both survey types were completed on the same day across all seasons. On 31 of these days, caribou were detected during road and viewshed surveys. During these days, the observation distance was farther for viewshed surveys in 13 out of 31 occasions (42%) and the observation distance was farther for road surveys in 8 of 31 occasions (26%). For the remaining 10 of 31 occasions, the recorded distances were the same between survey types.
- The percentage of road surveys with caribou detections was higher than the percentage of viewshed surveys with caribou detections across all seasons.
- A significantly larger proportion of road surveys detected caribou compared to viewshed surveys, and road surveys detected significantly larger groups. Road surveys tended to observe groups that triggered GST more than viewshed surveys. Viewshed surveys detected caribou at significantly further distances.
- Road surveys were conducted more frequently, were more likely to detect caribou, and were more likely to result in road closure mitigation, despite the lower average detection distance compared to viewshed surveys.
- The results of the comparison presented indicates that if viewshed survey effort is discontinued, it would likely have little impact on the effectiveness of wildlife monitoring and triggering mitigation. In October 2024, the TAG agreed that viewshed surveys are less effective at detecting caribou and may be discontinued as future TEMP monitoring (Agnico Eagle 2024d).

Caribou Migration Studies

- Two caribou collar studies were conducted in 2024 based on TAG recommendations, including characterization of fall migration and an assessment of the spring 2024 lead caribou mitigation measures.
- The assessment for characterizing fall migration found that fall migration patterns are more variable than spring migration patterns. The high variability of fall migration poses additional challenges for implementation of a lead caribou approach for caribou protection measures and may be less effective in producing the intended mitigative results of a lead caribou migration closure in the fall compared to spring. Following the August 2024 TAG meeting (TAG #20; Agnico Eagle 2024c), the TAG recommended to pursue a different mitigation strategy for the fall migration focused on increasing gaps in traffic to facilitate caribou crossings.
- New spring mitigation measures for the protection of lead caribou were developed in collaboration with the TAG, and during spring 2024 the new mitigation measures were implemented. After implementing new measures, an exploratory analysis of collared caribou and road survey date for the 2024 spring migration was completed. The study found no increase in caribou speeds, or a shorter migration duration compared to previous years. This lack of detectable effect may be due to limited number of collared caribou interacting with the Mine and roads or minimal magnitude of effect for this mitigation strategy given the limited interaction time and number of caribou with roads. Potential benefits to migration identified by Inuit Qaujimajatuqangit (IQ) may differ from metrics such as speed or duration. Lead caribou closures allow for a collaborative approach through community input in the mitigation decision making process, while also remaining feasible for Mine operation.

Study Limitations

On behalf of Agnico Eagle Mines Limited (Agnico Eagle), WSP Canada Inc. (WSP) has prepared this Wildlife Monitoring Summary Report for the 2024 Monitoring Period at the Meadowbank Complex.

This report was prepared, based in part, on information obtained from Agnico Eagle and other external information sources. In preparing the report, WSP has relied in good faith on the information provided. We accept no responsibility for any deficiency or inaccuracy contained in this report because of our reliance on the aforementioned information.

The findings and conclusions documented in this report have been prepared for the specific application to this Project and have been developed in a manner consistent with that level of care normally exercised by environmental professionals currently practicing under similar conditions in the jurisdiction.

With respect to regulatory compliance issues, regulatory statutes are subject to interpretation. These interpretations may change over time and should be reviewed regularly.

Table of Contents

1.0 INTRODUCTION 1-1

1.1 Background 1-1

1.2 Project Description 1-3

1.3 Study Area Boundaries 1-4

1.3.1 Meadowbank Mine, Vault Pit, and AWAR 1-4

1.3.2 Whale Tail Mine and Haul Road 1-4

1.4 Monitoring Approach 1-4

1.5 Report Objectives 1-5

1.6 Inuit Involvement 1-5

1.7 Terrestrial Advisory Group 1-6

1.8 Mitigation Audit 1-7

2.0 CARIBOU MANAGEMENT DECISION TREE 2-1

2.1 Overview 2-1

2.2 Objectives 2-1

2.3 Duration 2-1

2.4 Methods 2-1

2.5 Results 2-2

2.6 Accuracy of Impact Predictions 2-2

2.7 Management Recommendations 2-2

3.0 ROAD SURVEYS 3-1

3.1 Overview 3-1

3.2 Objectives 3-1

3.3 Duration 3-1

3.4 Methods 3-1

3.5 Historical Results 3-2

3.6 2024 Results 3-2

3.6.1 AWAR Surveys 3-2

3.6.2 WTHR Surveys 3-5
3.6.3 Caribou Counts along AWAR and WTHR 3-7
3.6.4 Wildlife Observations Along the AWAR and WTHR 3-13
3.6.5 Road-related Mitigation 3-16
3.6.6 AWAR and WTHR Closures 3-16
3.6.7 Traffic Data 3-19
3.6.8 Caribou Responses to Mitigation 3-26
3.6.9 Road-related Wildlife Mortality 3-30
3.7 Accuracy of Impact Predictions 3-32
3.8 Management Recommendations 3-33
4.0 PITS AND MINE SITE GROUND SURVEYS 4-1
4.1 Overview 4-1
4.2 Objectives 4-1
4.3 Duration 4-1
4.4 Methods 4-1
4.4.1 Incidental Mine Site Wildlife Observations 4-2
4.5 2024 Results 4-2
4.5.1 Pit and Mine Site Ground Surveys 4-2
4.5.2 Wildlife Observations from Pit and Mine Surveys 4-2
4.5.3 Bird Nests 4-5
4.5.4 Wildlife Deterrent Records 4-5
4.5.5 Waterbird Monitoring 4-8
4.5.6 Raptor Monitoring 4-8
4.5.7 Predatory Mammal Deterrence and Protection 4-8
4.5.8 Wildlife Mortality – Meadowbank and Whale Tail Sites 4-9
4.5.9 Helicopter Activity 4-10
4.5.10 Helicopter Activity and Wildlife 4-23
4.6 Accuracy of Impact Predictions 4-26
4.7 Management Recommendations 4-28

5.0 WILDLIFE HABITAT MONITORING 5-1
5.1 Overview 5-1
5.2 Objective 5-1
5.3 Duration 5-3
5.4 Methods 5-3
5.5 Historical Results 5-4
5.5.1 Meadowbank Mine Site 5-4
5.5.2 AWAR 5-5
5.5.3 Whale Tail Mine and WTHR 5-5
5.6 Results 5-5
5.6.1 AWAR 5-5
5.6.2 Meadowbank Mine Site 5-7
5.6.3 Whale Tail Mine and WTHR 5-11
5.7 Accuracy of Impact Predictions 5-13
5.8 Management Recommendations 5-13
6.0 CARIBOU SATELLITE-COLLARING PROGRAM 6-1
6.1 Overview 6-1
6.2 Objectives 6-1
6.3 Duration and Methods 6-1
6.4 Historical Results 6-2
6.4.1 2024 Caribou Movement Patterns 6-2
6.5 Accuracy of Impact Predictions 6-9
6.6 Management Recommendations 6-9
7.0 VIEWSHED SURVEYS 7-1
7.1 Overview 7-1
7.2 Objectives 7-1
7.3 Methods 7-1
7.4 Historical Results 7-1
7.5 2024 Results 7-4

7.6 Management Recommendations 7-12
8.0 REMOTE CAMERA PROGRAM 8-1
8.1 Overview 8-1
8.2 Objectives 8-1
8.3 Duration 8-1
8.4 Methods 8-1
8.4.1 Camera Deployment and Settings 8-1
8.4.2 Photograph Review 8-2
8.4.3 Artificial Intelligence Classification 8-2
8.4.4 Data Analysis 8-3
8.5 Results 8-3
8.6 Management Recommendations 8-6
9.0 BLAST MONITORING 9-1
9.1 Overview 9-1
9.2 Objectives 9-1
9.3 Duration 9-1
9.4 Methods 9-1
9.4.1 Vibration and Overpressure Model 9-1
9.4.2 Caribou Behaviour Monitoring 9-2
9.4.3 Caribou Behaviour and Blasting Parameters 9-2
9.5 Results 9-3
9.5.1 Blast Monitoring 9-3
9.5.2 Caribou Behaviour Monitoring 9-3
9.5.3 Vibration and Overpressure Model and Behaviour 9-7
9.6 Management Recommendations 9-8
10.0 HUNTER HARVEST STUDY 10-1
10.1 Overview 10-1
10.2 Objectives 10-1
10.3 Methods 10-2

10.4 Results 10-2
10.5 Accuracy of Impact Predictions 10-3
10.6 Management Recommendations 10-4
11.0 INTEGRATED CARIBOU MONITORING RESULTS 11-1
11.1 Integrated Results 11-1
12.0 PREDATORY MAMMAL DEN MONITORING 12-1
12.1 Objectives 12-1
12.2 Methods 12-1
12.3 Results 12-1
12.4 Accuracy of Impact Predictions 12-1
12.5 Management Recommendations 12-1
13.0 RAPTOR NEST MONITORING 13-1
13.1 Overview 13-1
13.2 Objectives 13-1
13.3 Duration 13-1
13.4 Methods 13-1
13.4.1 Nest Monitoring 13-1
13.4.2 Nest Occupancy Analysis 13-2
13.5 Results 13-2
13.5.1 Nest Monitoring 13-2
13.5.2 Nest Occupancy Analysis 13-6
13.6 Accuracy of Impact Predictions 13-6
13.7 Management Recommendations 13-6
14.0 WATERBIRD NEST MONITORING 14-1
14.1 Overview 14-1
15.0 BREEDING BIRD MONITORING 15-3
15.1 Overview 15-3
15.1.1 Breeding Bird Surveys 15-3
15.1.2 PRISM Plots 15-3

15.2 Management Recommendations 15-3
16.0 NON-NATIVE PLANT SURVEYS 16-1
16.1 Overview 16-1
16.2 Methods 16-1
16.3 2024 Results 16-2
16.3.1 Historical Results 16-4
16.4 Management Recommendations 16-4
17.0 SPECIAL STUDIES 17-1
17.1 Snow Study 17-1
17.1.1 Overview 17-1
17.1.2 Methods 17-2
17.1.3 Results 17-5
17.1.4 Management Recommendations 17-10
17.2 Caribou Behaviour 17-10
17.2.1 Overview 17-10
17.2.2 Methods 17-11
17.2.3 Results 17-13
17.2.4 Management Recommendations 17-14
17.3 Road and Viewshed Survey Comparison 17-15
17.3.1 Overview 17-15
17.3.2 Methods 17-15
17.3.3 Results 17-17
17.3.4 Management Recommendations 17-21
17.4 Caribou Migration Studies 17-21
18.0 SUMMARY 18-1
18.1 Accuracy of Impact Predictions 18-1
19.0 CLOSURE 19-1
20.0 REFERENCES 20-1

TABLES

Table 1-1: Incorporation of Indigenous Traditional Knowledge in Annual Report 1-6

Table 2-1: Seasonal Caribou Group Size Thresholds Applied During 2024. 2-2

Table 3-1: Details of All-Weather Access Road Wildlife Surveys from 2007 to 2024 3-3

Table 3-2: Seasonal Caribou Counts and Detections per Survey on the All-Weather Access Road, 2007 to 2024 3-4

Table 3-3: Monthly Counts of Caribou Observed per Survey Trip Along the All-Weather Access Road from 2007 to 2024 3-5

Table 3-4: Details of Whale Tail Haul Road Surveys from 2017 to 2024 3-6

Table 3-5: Seasonal Caribou Counts and Detections per Survey on the Whale Tail Haul Road, 2017 to 2024 3-6

Table 3-6: Average Monthly Counts of Caribou Observed per Survey Trip Along the Whale Tail Haul Road from 2017 to 2024 3-7

Table 3-7: Caribou group observation sample sizes for spring and fall road surveys, 2007-2024 3-12

Table 3-8: Caribou GST summaries for spring and fall based on 2024 data 3-13

Table 3-9: Species Detected During Road Surveys at All-Weather Access Road and Whale Tail Haul Road in 2024 by Month 3-13

Table 3-10: Species Detected Incidentally at All-Weather Access Road and Whale Tail Haul Road in 2024 by Month 3-15

Table 3-11: Number of Road Closures and Restrictions Implemented Along the All-Weather Access Road and Whale Tail Haul Road, 2024 3-17

Table 3-12: Number of Road Closure Hours Due to Ungulate Activity, Weather, or Maintenance Along the All-Weather Access Road and Whale Tail Haul Road, 2024. 3-18

Table 3-13: Percentage of Caribou Encountering Closed Roads 3-19

Table 3-14: Monthly Traffic Data for the Meadowbank All-Weather Access Road in 2024 3-20

Table 3-15: Monthly Traffic Data for the Meadowbank Whale Tail Haul Road in 2024 3-20

Table 3-16: Convoy Tracker for the AWAR and WTHR in 2024 3-22

Table 3-17: Observations of Caribou Crossing AWAR and WTHR in 2024 3-27

Table 3-18: Project Related Wildlife Mortalities Related to the All-Weather Access Road and Whale Tail Haul Road in 2024 3-31

Table 3-19: Summary of Road-related Wildlife Mortality Records (2007 to 2024) 3-32

Table 3-20: Accuracy of Impact Predictions – Sensory Disturbance and Mortality along the All-Weather Access Road and Whale Tail Haul Road in 2024 3-33

Table 4-1: Number of Formal Pit and Mine Site Ground Surveys by Month, 2024 4-2

Table 4-2: Wildlife Observations from Formal Pit and Mine Site Ground Surveys by Month 2024 4-3

Table 4-3: Incidental Wildlife Observations in 2024 by Month 4-4

Table 4-4: Total Number of Deterrent Records by Year for the Project 4-5

Table 4-5: Details of Deterrence Activities for 2024 4-6
Table 4-6: Summary of Deterrence Events in 2024 4-8
Table 4-7: Summary of Deterred Predatory Mammals at the Meadowbank Mine and Whale Tail Sites from 2015 to 2024 4-9
Table 4-8: Wildlife Mortalities at Meadowbank and Whale Tail Sites in 2024 4-9
Table 4-9: Summary of Project-Related Wildlife Mortality Records for Caribou and Predatory Mammals (2007 to 2024) 4-10
Table 4-10: Summary of Helicopter Flights in 2024 4-20
Table 4-11: Summary of Short-Range Helicopter Flights in 2024 4-21
Table 4-12: Summary of Long-Range Helicopter Flights in 2024 4-22
Table 4-13: Summary of Wildlife and Flight Co-occurrences 4-25
Table 4-14: Accuracy of Impact Predictions – Mine Site Wildlife Disturbances 4-27
Table 5-1: Habitat Mapping Monitoring Parameters, Predicted Footprint Losses, Permitted Areas, and Thresholds for the Meadowbank Mine, All-Weather Access Road 5-2
Table 5-2: Habitat Mapping Monitoring Parameters, Predicted Footprint Losses, Permitted Areas, and Thresholds for the Whale Tail Mine and Haul Road 5-2
Table 5-3: Habitat Suitability Rankings for VECs. 5-3
Table 5-4: AWAR Unit Totals from 2010 Wildlife Monitoring Summary (Agnico Eagle 2011) 5-6
Table 5-5: AWAR Footprint ELC Unit Loss 2024 5-6
Table 5-6: AWAR Predicted and Actual High Suitability Habitat Losses 5-7
Table 5-7: Meadowbank Mine Site Unit Totals from the 2021 Wildlife Monitoring Summary (Golder 2022) 5-7
Table 5-8: Meadowbank and Vault Footprint ELC Unit Losses for 2024 using KELC 5-8
Table 5-9: Meadowbank Mine Site Predicted and Actual High Suitability Habitat Losses from the 2021 Summary (Golder 2022) 5-8
Table 5-10: Meadowbank Mine Site Predicted and Actual High Suitability Habitat Losses for 2024 using KELC 5-9
Table 5-11: Whale Tail Mine and Whale Tail Haul Road Footprint ELC Unit Loss 5-11
Table 5-12: Whale Tail Mine and Haul Road Predicted and Actual High Suitability Habitat Losses 5-11
Table 5-13: Accuracy of Impact Predictions – Habitat Loss 5-13
Table 6-1: Total Number of Collared Caribou and GPS Fixes across Years. 6-2
Table 6-2: Number of Collared Caribou by Season that Interacted with the Project RSA with Arrival and Exit Dates. 6-2
Table 7-1: Total Number of Wildlife Observed during Height of Land Surveys along the Whale Tail Haul Road in 2019 7-2
Table 7-2: Total Number of Wildlife Observed during Viewshed Surveys along the Whale Tail Haul Road from 2020 to 2023 7-2
Table 7-3: Viewshed Survey Effort by Season, 2024 7-4

Table 7-4: Viewshed Surveys Completed and Number of Caribou Observed per Season in 2024 7-5
Table 7-5: Survey Condition Details for Viewshed Surveys with Caribou Sightings, 2024 7-6
Table 7-6: Total Number of Wildlife Observed during Viewshed Surveys along the Whale Tail Haul Road in 2024 7-10
Table 8-1: Remote Camera Locations along the Whale Tail Haul Road, 2024 8-2
Table 8-2: Caribou Detection Rates (Caribou Observations/Active Day) from Remote Cameras in 2024 8-4
Table 8-3: Caribou Crossing Events on Remote Cameras, 2024 8-6
Table 9-1: Number of Pre-Blast Surveys per Month, 2024 9-4
Table 9-22: Caribou Behaviour Monitoring and Blast Data, 2021, 2022 and 2024 9-8
Table 10-1: Accuracy of Impact Predictions–- Baker Lake Hunter Harvest Study 10-4
Table 11-1: Summary of Caribou Monitoring Activities and Management Responses in 2024 11-1
Table 11-2: Summary of Mine-related Effects on Caribou in 2024 11-3
Table 12-1: Accuracy of Impact Predictions–- Disturbance to Denning Predatory Mammals for the Meadowbank and Whale Tail Sites 12-1
Table 13-1: Record of Peregrine Falcon Nesting from 2009 and 2024 13-3
Table 13-2: Peregrine Falcon Nest Monitoring Data, 2024 13-4
Table 13-3: Accuracy of Impact Predictions to Nesting Raptors and Raptor Mortality 13-6
Table 16-1: Summary of 2024 Non-Native Plant Survey Effort 16-2
Table 16-2: Historical Non-Native Plant Survey Results 16-4
Table 17-1: Summary of Snow Metrics Collected at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road across 2020-2024 17-6
Table 17-2: Summary of Statistical Tests on Snow Depth, Snow Hardness, and Track Depth Data Collected at Survey Plots along the Whale Tail Haul Road across 2020-2024 17-6
Table 17-3: Number of Road and Viewshed Surveys Completed by Month. 17-15
Table 17-4: Summary Statistics for Caribou Observations from Road and Viewshed Surveys along the Whale Tail Haul Road. 17-19
Table 18-1: Potential Project Effects, Thresholds and Results of Monitoring in 2024 18-1

FIGURES

Figure 1-1: Meadowbank Complex Location and Monitoring Studies Boundaries 1-2
Figure 3-1: Total Number of Caribou Observed Each Year During All-Weather Access Road and Whale Tail Haul Road Surveys. 3-7
Figure 3-2: Caribou Counts along the All-Weather Access Road and Whale Tail Haul Road, Year-Round (2024) 3-9
Figure 3-3: Caribou Counts along the All-Weather Access Road and Whale Tail Haul Road, Spring and Summer (2024) 3-10

Figure 3-4: Caribou Counts along the All-Weather Access Road and Whale Tail Haul Road, Fall and Winter (2024) 3-11

Figure 3-5: Total Vehicle Traffic (One-way Trips) Along All-Weather Access Road and Whale Tail Haul Road per Month in 2024 3-21

Figure 3-6: Number of Caribou Crossing Observations per Month on the All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) during 2024 3-30

Figure 4-1: Examples of Short-Range and Long-Range Flights with Flight Segments Classified as Take-off/Landing (grey), and Remaining Flight Segments Classified as Above or Below the Minimum Required Height Above the Ground. 4-13

Figure 4-2: Mine-related Helicopter Activity Along the All-Weather Access Road and Whale Tail Haul Road, 2024 4-14

Figure 4-3: Mine-Related Short-Range Flights Operated Below the Minimum Flight Altitude During Spring, 2024 4-15

Figure 4-4: Mine-Related Short-Range Flights Operated Below the Minimum Flight Altitude During Summer, 2024 4-16

Figure 4-5: Mine-Related Short-Range Flights Operated Below the Minimum Flight Altitude During Fall, 2024 4-17

Figure 4-6: Mine-Related Long-Range Flights Operated Below the Minimum Altitude During Spring, 2024 4-18

Figure 4-7: Mine-Related Long-Range Flights Operated Below the Minimum Altitude During Summer, 2024 4-19

Figure 4-8: Distribution of the Average Cruising Height (m) of Short-Range Flights, Excluding Take-off/Landing and Permissible Low Flights 4-22

Figure 5-1: Meadowbank Mine Site Footprint, 2024 5-10

Figure 5-2: Whale Tail Mine and Haul Road Footprint, 2024 5-12

Figure 6-1: Caribou Annual Ranges 6-4

Figure 6-2: Collared Caribou Movements During Spring (April 1 to May 25), 2024 6-5

Figure 6-3: Collared Caribou Movements During Summer (May 26 to September 21), 2024 6-6

Figure 6-4: Collared Caribou Movements During Fall (September 22 to December 15), 2024 6-7

Figure 6-5: Collared Caribou Movements During Winter (December 16 – March 31), 2024 6-8

Figure 7-1: Location of Viewshed Surveys along Whale Tail Haul Road, 2024 7-11

Figure 8-1: Camera Detection and Crossing Rates from Remote Camera Data (2024) 8-5

Figure 9-1: Caribou Behavioural Response Following Blasting Events Across all Three Monitoring Years 9-5

Figure 9-2: Caribou Behaviour Before, During, and After Blasting for Each Year and for all Years Combined. 9-6

Figure 13-1: Peregrine Falcon Nest Locations, 2024 13-5

Figure 16-1: 2024 Non-Native Plant Survey Locations 16-3

Figure 17-1: Snow Survey Plot Locations, 2020-2024 17-3

Figure 17-2: Survey Plot Configuration Used During Snow Survey Monitoring Along the Whale Tail Haul Road 17-4

Figure 17-3: A) Snow Depth (m), B) Snow Hardness (N), C) Slope (°), D) Track Depth (cm), E) Berm Height (m), and F) Berm Width (m) at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road. 17-7

Figure 17-4: Snow Depth (m) at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road. 17-8

Figure 17-5: Snow Hardness (N) at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road. 17-9

Figure 17-6: Track depth (cm) of caribou at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road. 17-9

Figure 17-7: Group Size and Distance of all Caribou Observations by Survey Type and Season. The Dashed Line Indicates Group Size Thresholds for each Season. 17-20

APPENDICES

APPENDIX A
Wildlife Database

APPENDIX B
Road Restrictions

APPENDIX C
Wildlife Mortalities

APPENDIX D
Exemption Permits

APPENDIX E
Helicopter Flights

APPENDIX F
Hunter Harvest Study

APPENDIX G
Arctic Raptors Report

APPENDIX H
Waterbird Monitoring Publication

APPENDIX I
Meadowbank Bird Surveys Report

APPENDIX J
Caribou Behaviour Monitoring

APPENDIX K
Fall Migration

Acronyms

Acronym	Full Term
AEAR	Amaruq Exploration Access Road
ANOVA	Analysis of Variance
ANZEC	Australian and New Zealand Environment Council
ARGOS	Advanced Research and Global Observation Satellite
AWAR	All-weather Access Road
BBS	Breeding Bird Survey
CESCC	Canadian Endangered Species Conservation Council
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
COVID-19	Coronavirus Disease
ECCC	Environment and Climate Change Canada
ELC	Ecological Land Classification
FEIS	Final Environmental Impact Statement
GIS	Geographic Information System
GN	Government of Nunavut
GN DoE	Government of Nunavut Department of Environment
GPS	Global Positioning System
GST	Group Size Threshold
HHS	Hunter Harvest Study
HOL	Height-of-Land
HT	Heath Tundra
HTO	Hunters and Trappers Organization
IIBA	Inuit Impact Benefit Agreement
IQ	Inuit Qaujimajatuqangit
KivIA	Kivalliq Inuit Association
KM	Kilometer Marker
LSA	Local Study Area
NIRB	Nunavut Impact Review Board
NPAG	Non-potentially Acid Generating
NPC	Noise Pollution Control
NWB	Nunavut Water Board
MOU	Memorandum of Understanding
PPL	Peak Pressure Level
PPV	Peak Particle Velocity
PRISM	Program for Regional and International Shorebird Monitoring
QA/QC	Quality Assurance/Quality Control
RSA	Regional Study Area
TAG	Terrestrial Advisory Group
TEMP	Terrestrial Ecosystem Management Plan
TOR	Terms of Reference
UTM	Universal Transverse Mercator
VEC	Valued Ecosystem Component
WTHR	Whale Tail Haul Road

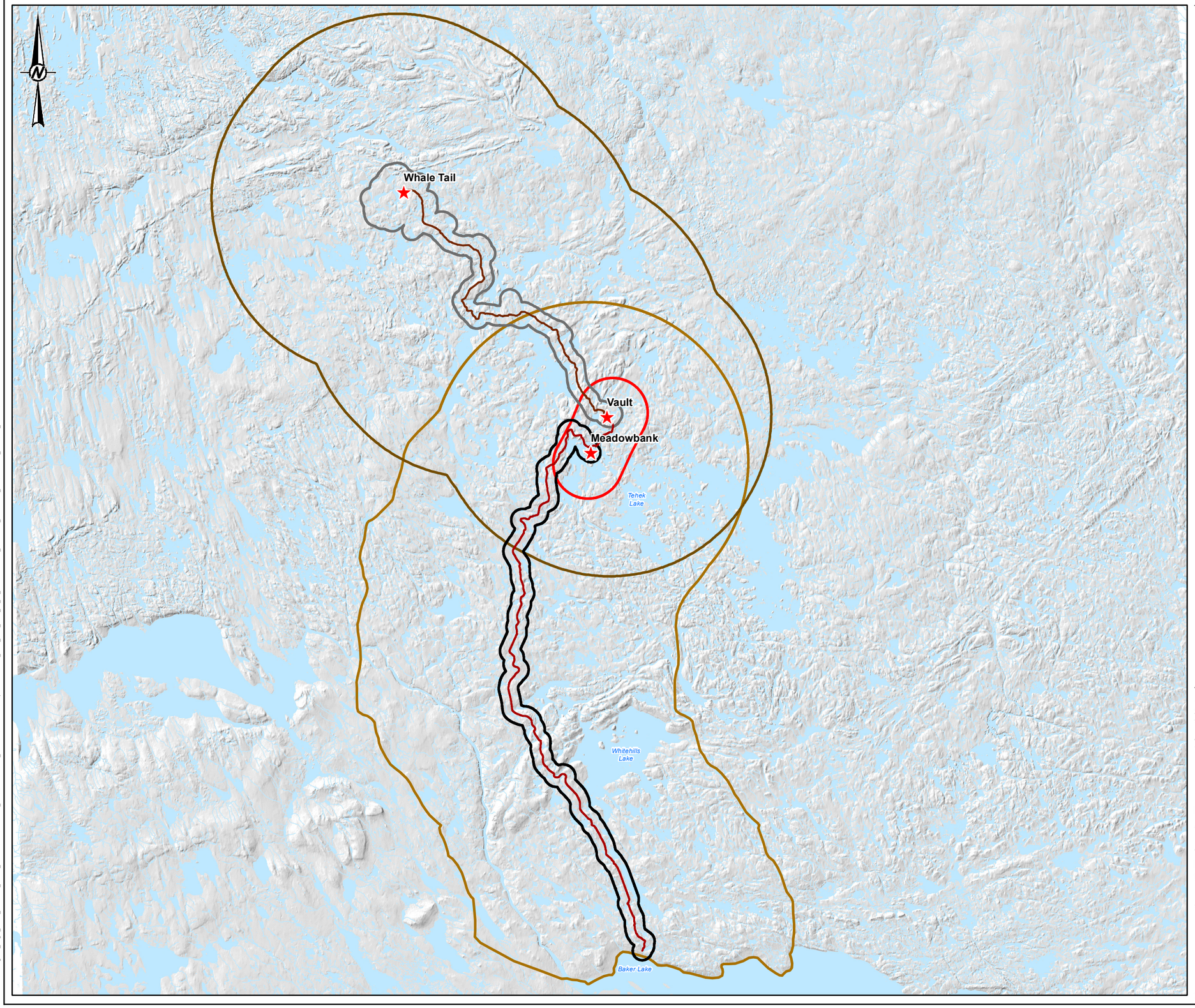
1.0 INTRODUCTION

1.1 Background

The Agnico Eagle Mines Limited (Agnico Eagle) Meadowbank Complex (the Project) is located in the Kivalliq Region of Nunavut (Figure 1-1) and received a Project Certificate No. 004 from the Nunavut Impact Review Board (NIRB) in 2006. The subsequent Water Licence, Government of Nunavut (GN) and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Land Lease, and Kivalliq Inuit Association (KivIA) Land Use Production Lease, allowed for the construction of a gold mine and ancillary facilities including an All-weather Access Road (AWAR), barge unloading facilities, lay-down area, and a fuel tank farm near the Hamlet of Baker Lake. The Whale Tail Mine, an extension of the Meadowbank Mine, received a Project Certificate No. 008 from NIRB in 2018.

Up to 2017, annual reports were based on the Terrestrial Ecosystem Management Plan (TEMP) developed by Cumberland Resources (Cumberland 2006). The TEMP was a requirement of the Meadowbank Project Certificate No. 004, Condition 54 and Whale Tail Mine Certificate No. 008, Condition 28. Since 2018, the TEMP version 7 has incorporated the Whale Tail component of the Project and reflects changes in management and monitoring approaches since 2006 (Agnico Eagle 2019). The revised TEMP also benefitted from collaborative input from the GN, the KivIA, and the Hunters and Trappers Organization (HTO) of Baker Lake through annual report reviews, technical reviews, workshops, and discussions within the Terrestrial Advisory Group (TAG). A new version of the TEMP (TEMP version 9) was reviewed and approved by the TAG during March 2025, so TEMP v9 will be the version applied for the 2025 monitoring and reporting year. Version 7 of the TEMP was used as the basis for 2024 monitoring and mitigation presented in this report. The scope of the TEMP is to report on monitoring of the Mine during construction, operation, maintenance, reclamation, and closure.

This annual report includes data collected in 2024, the 15th year of Mine operation, and is the 19th of a series of annual Wildlife Monitoring Summary Reports for the Project. The purpose of this report is to summarize 2024 data collected from wildlife monitoring programs, and to describe natural variation and potential Mine-related changes in wildlife populations within and adjacent to the Meadowbank Complex. The 2024 Annual Report describes monitoring objectives and methods, historical and current year results, mitigation activities, and management recommendations based on 2024 monitoring results. Furthermore, comments received from various intervenors through the NIRB review of the 2023 annual report were incorporated, where possible, into analyses and reporting in this document.



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY



0 12 24

1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MEADOWBANK COMPLEX LOCATION AND MONITORING STUDIES BOUNDARIES

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	1-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_01_01_MEADOWBANK_COMPLEX_LOCATION_MONITORING_STUDIES_BOUNDARIES.mxd PRINTED ON: 2025-03-19 AT 11:42:53 AM

1.2 Project Description

The Meadowbank Mine is located approximately 90 km north of the community of Baker Lake. The Whale Tail Mine, with an expected operating life of ten years (2019 to 2028), is located approximately 180 km north of Baker Lake. The Whale Tail mine is an open-pit mine and underground mine connected to Meadowbank Mine by a 64 km all season haul road. The local physiography is characterized by numerous lakes and low, rolling hills covered mainly by lichen/rock complexes, and heath tundra.

Environmental baseline studies were conducted prior to Meadowbank and Whale Tail Mine approvals and integrated into Project designs according to the Cumberland (2006) and Agnico Eagle (2019) TEMPs. Wildlife Valued Ecosystem Components (VECs) for the Meadowbank mine were identified in consultation with regulatory agencies and Baker Lake residents, and considered criteria such as conservation status, relative abundance within the Project study area, importance in subsistence lifestyle and economy, importance in predator-prey systems, habitat requirement size and sensitivity, and contribution to local area concerns. Based on these selection criteria, key terrestrial VECs determined for the Meadowbank mine were wildlife habitat, ungulates, predatory mammals, small mammals, raptors, waterbirds, and upland breeding birds. Because of limited evidence that small mammals were affected by the Project, this VEC was not included in the Whale Tail mine or revised TEMP. Further details can be found in the Final Environmental Impact Statements (FEIS) for the Meadowbank Mine (Cumberland 2005) and the Whale Tail Mine (Golder 2016; Golder 2018).

Construction of a 106.8 km AWAR between the community of Baker Lake and the Meadowbank Mine was completed in March 2008 and provides Mine site access and re-supply, while on-site Mine haul and access roads connect open-pit areas to ancillary facilities. Meadowbank Mine site facilities include a mill, power plant, maintenance facilities, tank farm for fuel storage, water treatment plant, sewage treatment plant, airstrip, and accommodations. Mine components include open pits, waste rock storage facilities, and a tailings storage facility.

In 2008, construction of numerous camp infrastructure facilities was completed. In 2009, the principal Mine site construction began, and Mine operation commenced in early 2010. Mining at Goose Pit was finished in 2015 while Agnico Eagle continued ongoing mining operations at Portage and Vault pits and investigated expansion of the Vault area into Phaser Lake. In 2018, an expansion was made in pit E (Portage) to extend mining and mill feed to bridge the gap between the end of mining activities in Meadowbank and the start of mining activities at Whale Tail Mine. As a result, 2024 mining activities at the Meadowbank Complex included mining ore at the Whale Tail Mine and processing ore at the mill at the Meadowbank site.

To extend Mine operations and milling at Meadowbank Mine, Agnico Eagle developed the Whale Tail Mine and Haul Road Project, approximately 55 km north of the Meadowbank Mine, on a satellite deposit located on the Amaruq property in the Kivalliq Region of Nunavut. The Amaruq Exploration Access Road (AEAR) was built in 2016 and 2017 to access the Amaruq exploration site from the Meadowbank Mine. The AEAR was modified into the Whale Tail Haul Road (WTHR) (enlargement) following regulatory approval and was completed in 2018. Construction of the Whale Tail Dike in 2018 allowed for Whale Tail Lake North Basin dewatering starting in Q1, 2019, the pre-stripping of future Whale Tail Mine, and the construction of major infrastructures including the permanent camp, with accommodation and kitchen facilities, sewage treatment plan, tank farm for fuel storage, and freshwater intake. Open-pit mining operation at the Whale Tail deposit began in Q3 (30 September), 2019. Commercial operations at the IVR pit commenced on 31 December 2021. Permitting to expand the Whale Tail operation and extend the Mine life to 2028 was approved in August 2024. Other Project updates include implementation of several measures to increase Project capacity and equipment inventory prior to caribou migration. These changes have included increasing the long-haul truck fleet size in 2022 through 2024 to stockpile additional ore at the Meadowbank Complex, ensuring the mill is able to sustain 20 days of road closures,

installation of a 3,000,000 L fuel tank at the Meadowbank site, and installation of four permanent 50,000 L fuel tanks in 2022 to increase autonomy of the Whale Tail site.

1.3 Study Area Boundaries

1.3.1 Meadowbank Mine, Vault Pit, and AWAR

The Meadowbank Mine Local Study Area (LSA) includes a 5 km radius area centred on the Mine Site and a 5 km radius around the Vault Site creating an elliptical shape with a total area of 154 km^2. The AWAR LSA consists of a 3 km wide corridor centred on the AWAR between Baker Lake and the Meadowbank Mine. The Regional Study Area (RSA) encompasses an area that includes a 25 km radius area around the Meadowbank Mine and Vault sites and a 50 km wide corridor along the AWAR for a total area of 5,077 km^2 (Figure 1-1).

1.3.2 Whale Tail Mine and Haul Road

The Whale Tail LSA is a 3 km corridor centered on the WTHR and borrow site access roads (i.e., 1.5 km on either side of the road and 1.5 km around borrow areas) and includes an approximate 1.5 km buffer around development areas at the Whale Tail Mine area, for a total area of 282 km^2. The Whale Tail RSA is a 50 km corridor centred on the WTHR alignment (i.e., 25 km on either side of the WTHR and borrow site access roads, and 25 km around borrow areas), with a total area of 5,017 km^2 (Figure 1-1).

1.4 Monitoring Approach

Wildlife monitoring is an essential tool in protecting and maintaining wildlife occurring near the Project. The TEMP (Agnico Eagle 2019) is designed to be a comprehensive monitoring strategy with quantitative monitoring indicators to evaluate the accuracy of impact predictions and to meet the objectives of managing environmental impacts by the Project. Version 7 of the TEMP (Agnico Eagle 2019) was the version implemented for 2024. Version 9 of the TEMP was approved by the TAG in March 2025 is in the process of being submitted to regulatory agencies (Agnico Eagle 2025). Monitoring programs are designed to assess Project-related impact predictions and the effectiveness of mitigation measures. Measures on the effectiveness of mitigation will inform on whether monitoring or mitigation require adaptive management. Adaptive management is an on-going process of learning by doing that evolves throughout the life of the Project. Outcomes of adaptive management include increasing or decreasing, or no change, to mitigation or monitoring. Further study intended to better understand Mine-related effects may also be an outcome of adaptive management based on input from individual stakeholders or the TAG. Ongoing review of the TEMP and annual Wildlife Monitoring Summary Reports (which provide results of TEMP monitoring programs) by regulatory agencies, technical reviewers, and stakeholders will further support that local and regional concerns have been adequately addressed.

Environmental staff monitor wildlife near Project facilities (i.e., Meadowbank Mine and Whale Tail Mine) and along the AWAR and WTHR on a regular basis (Section 3.6). Where unacceptable risks to wildlife are observed, mitigation measures are implemented to avert animals from site activities and hazards in accordance with the TEMP (Agnico Eagle 2019). The decision trees used as mitigation and monitoring framework for caribou (*Rangifer tarandus groenlandicus*) and muskox (*Ovibos moschatus*) are outlined in Section 2.0. Detailed reporting protocols (e.g., a dangerous animal occurrence, monthly wildlife reports submitted to the GN DoE, road closure notification to GN, KivIA, HTO) are established and implemented by on-site environmental staff. During these events, Agnico Eagle representatives communicate any issues directly with the GN Department of Environment (DoE) Conservation Officer, KivIA, and the local HTO.

1.5 Report Objectives

The primary objectives of the 2024 Wildlife Monitoring Summary Report are to:

a) Report the results of the 2024 wildlife monitoring programs.

b) Summarize the monitoring strategy implemented over the course of the year.

c) Evaluate the function and validity of implemented monitoring and mitigation strategies.

d) Summarize adaptive management strategies.

e) Provide management recommendations for 2025.

f) Allow regulators to contribute toward improvements of wildlife mitigation and monitoring.

g) Include a summary of all caribou-related monitoring, mitigation, and Project management actions in one consolidated section.

1.6 Inuit Involvement

Since 1999, local Inuit from the community of Baker Lake have been involved in all wildlife-related baseline and monitoring surveys. The average number of Inuit involved in surveys varies annually. Programs with previous Inuit involvement include the LSA and RSA aerial survey, breeding bird plots and transects, waterfowl nest surveys, waterbird nest surveys for the Whale Tail Mine, raptor nest surveys, road surveys, viewshed surveys, habitat mapping, and phenology plots. Local harvesters participate in the Hunter Harvest Study (Section 10.0).

Four Inuit workers were under the employment of the environmental department and were involved in the monitoring programs during 2024. Additionally, two local contractors were used in 2024. Agnico Eagle environmental Inuit workers are involved in wildlife programs including caribou behavior monitoring, road surveys, viewshed surveys, and wildlife deterrence on site when required. In 2024, two Baker Lake Hunters and Trappers Organization (HTO) wildlife monitors completed road surveys regularly throughout the year.

As required by the Inuit Impact Benefit Agreement (IIBA), “Anything done by Agnico in order to implement the TEMP […] shall incorporate Inuit Qaujimanituqaugit”; therefore, Indigenous Traditional Knowledge or IQ has been incorporated in this annual report. See Table 1-1 for a summary of IQ incorporation.

Table 1-1: Incorporation of Indigenous Traditional Knowledge in Annual Report

Indigenous Traditional Knowledge	Agnico Eagle Implemented Measures	Report Integration
IQ says caribou have good hearing abilities, and it was noted that the flags could be disturbing to caribou.	Agnico Eagle implemented measures to reduce noise from road marker flags.	Discussed in Section 1.7. Doesn't impact monitoring but reduces sensory disturbance to wildlife.
IQ says caribou are sensitive to aircraft disturbance, such as from helicopters.	Caribou are surveyed using ground surveys (i.e., Road Surveys and Viewshed Surveys) instead of aerial surveys for ungulate monitoring to prevent disturbance from aircrafts. Additionally, flight restrictions are in place to reduce potential disturbance to wildlife and fewer project related flights occur during sensitive seasons.	Information about the current caribou monitoring approaches are discussed in in Sections 3.0 and 7.0. Information about helicopter flights and flight guidelines to minimize disturbance to wildlife are discussed in Section 4.5.9.
IQ says that caribou feet are sensitive, and caribou may be able to feel ground vibrations associated with blasting at further distances than humans.	Implemented blast monitoring study to understand how ground vibration and overpressure propagate over distance.	The blast monitoring study is presented in Section 9.0 of the report.
IQ says that it is important to allow the lead caribou to pass so that other caribou will follow the same migration paths. IQ says to not hunt or disturb lead caribou groups.	Agnico Eagle in collaboration with the TAG developed a lead caribou mitigation approach, which was implemented in spring 2024. Road closures allow the lead caribou to pass through the RSA with minimal disturbance.	The lead caribou mitigation approach was implemented in spring 2024 and is described in Section 3.0 of this report. This mitigation approach has been integrated into the next version of the TEMP, including updated management decisions trees.
IQ says that caribou will benefit from reduced sensory disturbance during fall migration, such as by reduced traffic.	Agnico Eagle in collaboration with the TAG developed new fall mitigation measures to allow use of convoys while creating gaps in traffic to facilitate caribou crossings. Longer gaps in traffic allow caribou to pass through the RSA with minimal disturbance.	The new fall mitigation measures were developed in 2024 and will be implemented in fall 2025 and are described in Section 3.0 of this report. This mitigation approach has been integrated into the next version of the TEMP, including updated management decisions trees.

1.7 Terrestrial Advisory Group

As per Project Certificate No.008, Condition 27 of the Whale Tail Pit FEIS Addendum (Golder 2016), Agnico Eagle has established a TAG consisting of representatives from Agnico Eagle, the Government of Nunavut Department of Environment (GN DoE), the KivIA, and the HTO.

A Memorandum of Understanding (MOU) and Terms of Reference (TOR) have been developed and signed by all parties in July 2019. Agnico Eagle provided a summary of TAG meeting outcomes to the NIRB since 2019.

The purpose of the TAG is to:

- Measure the relevant environmental effects of the Project on terrestrial wildlife.
- Confirm that the Project and mining activities are carried out within the terms and conditions of the Project Certificates No.004 and No.008 relating to the protection of terrestrial wildlife.
- Assess the accuracy of the predictions contained in the final environmental impact statement filed by Agnico Eagle with NIRB.
- Identify and select appropriate target species, indicators, and linkages for monitoring.

- Evaluate the effectiveness of mitigation measures and to support any required adaptive management of those measures.
- Identify any unforeseen Project-related effects.
- Provide an early warning mechanism to identify any Project-related effects.
- Determine and identify any cause-and-effect interactions between the Project and the environment.

TAG meetings were held on January 22 – 23, March 1, July 10, August 21, and October 31 – November 1 during 2024. The March, July, and August meetings were held online and in Baker Lake. The January and October/November meetings were in-person workshops held in Winnipeg; a conference call option was available for people who could not attend in person.

The January 22 - 23 workshop (TAG meeting #17, Agnico Eagle 2024a) focussed on discussions for the spring migration lead caribou protocols, including decisions trees. Mitigation measures were discussed for both the lead caribou closure period and the period following lead caribou closure.

The March 1 meeting (TAG meeting #18) was to sign the recommendation for spring migration mitigation protocols.

The July 10 meeting (TAG meeting #19, Agnico Eagle 2024b) included a review of the 2024 spring migration as well as discussion for fall migration planning.

The August 21 meeting (TAG meeting #20, Agnico Eagle 2024c) included presentations on fall migration caribou patterns followed by a discussion of whether lead caribou mitigation measures could be applied for fall. Due to the wide interval for fall migration and high variation in timing of migration, it was determined that a different mitigation protocol would be required for the fall season and a new protocol would not be implemented until fall 2025 (Agnico Eagle 2024d).

The TAG workshop held on October 31 – November 1, 2024 (TAG meeting #21, Agnico Eagle 2024d), included a presentation and discussion on the spring migration detailed analysis, as well as the decision to continue the lead caribou spring pilot program. Several presentations and discussions followed related to comments from the 2023 annual report review, including helicopter traffic monitoring and reporting and purpose of the remote camera program. Fall migration measure were discussed as well, with implementation planned for fall 2025. Many topics of this workshop were discussed in the context of TEMP version 9 updates, with a separate TEMP focused workshop planned for February 2025.

1.8 Mitigation Audit

A mitigation audit is an annual requirement outlined in the 2019 TEMP (Agnico Eagle 2019). Mitigation approaches applied at the Project stem from current practices at existing mines or were suggested during the environmental assessment review process. However, an auditing system supports evaluation on the use and effectiveness of the mitigation consistent with the principals of adaptive management and may identify or recommend changes to mitigation or monitoring. As an example, per Project Certificate No.008, Condition 32, Agnico Eagle engages with the Baker Lake HTO and other relevant parties to ensure that safety barriers, berms, and designed crossings associated with Project infrastructure, including the WTHR, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife.

The audit is to be undertaken internally and annually and summarized in the annual report and will focus specifically on mitigation listed in Section 4.1 of the TEMP version 7 (Agnico Eagle 2019). The audit will evaluate:

- what mitigation was implemented
- which mitigation is perceived or shown to be effective
- whether new mitigation has been implemented in response to new issues; and whether some mitigation is redundant or unnecessary

Results of internal mitigation audits are included throughout this report under the subheadings titled “Accuracy of Impact Predictions”, including information on thresholds, exceedances, and mitigation measures applied if applicable.

2.0 CARIBOU MANAGEMENT DECISION TREE

2.1 Overview

The 2019 TEMP version 7 (Agnico Eagle 2019) describes the use of decision trees or charts that outline adaptive monitoring and mitigation for ungulates for each of five phases: 1) caribou and mining operations; 2) caribou and Whale Tail Haul Road; 3) caribou and the AWAR; 4) caribou and blasting; and 5) muskox and operations (see Agnico Eagle 2019). Adaptive management that was developed in collaboration with the TAG was also implemented in 2024.

2.2 Objectives

The monitoring objectives are to:

1) Detect if effect thresholds have been exceeded.

2) Test the efficacy of mitigation.

3) Understand Project-related effects to ungulates. For ungulates, the decision trees are also an objective to manage sensory disturbance to caribou approaching the Project. Monitoring to detect caribou intensifies as caribou approach the Project and mitigation intensifies to reduce sources of sensory disturbance.

2.3 Duration

Monitoring activities for ungulates were carried out prior to, during, construction and operations. The use of decision trees for managing disturbance to ungulates is an ongoing and continuous monitoring and mitigation strategy for the life of the Project. Monitoring and mitigation intensity is increased and decreased as ungulates approach the Project in accordance with the decision trees and the adaptive management protocols that are agreed upon by the TAG.

2.4 Methods

The approach involves monitoring the number of ungulates in close proximity to mining operations through various monitoring tools including caribou collaring data, Viewshed surveys, AWAR and Whale Tail Haul Road surveys, and pit and Mine site ground surveys. Depending on the number of ungulates observed (i.e., caribou GST), proximity to the road, and time of year, different mitigation and monitoring levels are triggered (i.e., Level 1, Level 2, Level 3). For example, triggers may result in pit and Mine site ground surveys and/or haul road surveys increased up to every two days, and caribou satellite data reviewed daily. Example of mitigations include daily site-wide notifications, road closures to non-essential vehicles, and speed restrictions.

For the purposes of monitoring, a “group of caribou” is defined as: “An aggregation of caribou that are sufficiently close together that they can see and react to another animal’s behaviour and have the potential of responding should one or more animal in the aggregation become startled.” Updated caribou GSTs by season used for Meadowbank Complex in 2024 were developed based on instructions provided by the GN (Table 2-1; GN 2021). A GST of 13 muskox is used year-round, and mitigation and monitoring related to muskox is performed according to Figure 10 of 2019 TEMP version 7 (Agnico Eagle 2019). For further details on the reasoning behind caribou GSTs and the decision chart approach, refer to the 2019 TEMP version 7 (Agnico Eagle 2019). The GST approach and monitoring/management outcomes is reviewed by the TAG on a regular basis to determine whether an acceptable balance has been achieved between mining operations and conserving caribou populations. As GSTs are the main trigger for mitigation and management, understanding their efficacy for overall herd protection is of high importance. Further information about the timing and implementation of caribou protection measures are found in Section 3.6.6.

Table 2-1: Seasonal Caribou Group Size Thresholds Applied During 2024.

Season	Dates[a]	Group Size Threshold
Spring	1 April to 25 May	38
Summer	26 May to 21 September	25
Fall	22 September to 15 December	88
Winter	16 December to 31 March	25

(a) Date ranges are based on Government of Nunavut seasonal range guidelines.

2.5 Results

The decision trees were used throughout 2024. Data collection methods were implemented in 2024 to link individual observations to mitigations, through use of field tablets linked to a customizable EQuIS Collect database. Paper data forms are carried in case issues arise with field tablets. All wildlife observations, and associated mitigations are provided in Appendix A (Wildlife Observations). Summaries of wildlife survey results are discussed in their respective sections. A summary of AWAR and WTHR closure are discussed in Section 3.6.6. The majority of mitigations were implemented based on road survey observations (Section 3.0; Appendix A). Few mitigations were implemented based on other survey types, including pit and mine site ground surveys (Section 4.0; Appendix A).

2.6 Accuracy of Impact Predictions

An objective of the decision tree approach is to reduce sensory disturbance to caribou approaching the Project. The objective is not linked to an impact prediction as the monitoring is to trigger mitigation rather than to test a prediction.

2.7 Management Recommendations

Wildlife observations should continue to be documented using approaches implemented in 2024 that allow individual observations to be linked to mitigations, providing evidence of use of decision trees.

3.0 ROAD SURVEYS

3.1 Overview

A systematic road survey monitoring program for the AWAR, and WTHR has been designed to evaluate sensory disturbance for wildlife, particularly caribou, muskoxen, and predatory mammals utilizing habitats adjacent to the roads. The program also monitors incidental mortality of species as they are encountered within the Project infrastructure, but in particular near the roads. In 2017 and 2018, the Vault Road has been surveyed and reported separately from the WTHR, but since 2020 the Vault Road observations are considered part of the WTHR observations and results.

3.2 Objectives

The primary objectives of the road survey monitoring program are to:

1) Document wildlife utilization along the AWAR and WTHR corridors.
2) Evaluate wildlife trends along the road corridors, including identifying areas where higher densities of wildlife are observed.
3) Inform on the need for adaptive mitigation, such as temporary road closures during peak caribou migration periods.
4) Inform whether mortality thresholds for wildlife are exceeded.
5) Monitor road-related injuries or mortalities of caribou. The Project-wide threshold mortality level for ungulates is two individuals per year (as per TEMP version 7).
6) Monitor road-related injuries or mortalities of predatory mammals. The Project-wide threshold mortality level for predatory mammals is two individuals per year (as per TEMP version 7).

3.3 Duration

The AWAR and WTHR systematic road surveys are ongoing over the operational phase of the Project and are scheduled to be conducted a minimum of once per week throughout the year, every second day during sensitive seasons (i.e., contingent on weather and road access; see Figures 7 and 8 in TEMP v7). Survey frequency increases to daily if caribou GSTs are exceeded within 4 km (Figures 7 and 8 in TEMP v7). Muskox are also monitored during road surveys, and muskox observations can increase road survey frequency year-round if muskox GST is exceeded within 500 m of roads (Figure 10 in TEMP v7). Agnico Eagle is committed to conducting a minimum of 75 road surveys per year along the AWAR and WTHR. Monitoring of vehicle-related wildlife mortality is continual along all road segments.

3.4 Methods

Agnico Eagle has signed an MOU with the Baker Lake HTO to provide a wildlife monitor for road monitoring beginning in October 2018. An amended MOU was signed in February 2022, retroactive to 8 November 2021, to hire a second wildlife monitor that will work on the AWAR and WTHR. In 2021, the monitor was primarily on the AWAR due to COVID restrictions. From 2022 to 2024, two Baker Lake HTO wildlife monitors completed road surveys regularly throughout the year.

The survey team typically includes two observers (one is the driver) in a vehicle. The terrain on both sides of the road is surveyed as the vehicle progresses at a maximum speed of 30 km per hour in areas where wildlife is present. For each sighting, the vehicle is safely parked in a road pullout and UTM coordinates are recorded along

with the estimated distance of the animal(s) from the road, nearest road marker, species, number, direction of travel and a variety of other information (e.g., behavior of animals). All data are recorded electronically in tablet forms. Where animals are sighted close to roads and a risk of collision with vehicles is possible, the environmental monitor/observers report the number of animals, location, and direction of travel to the Mine radio dispatcher who informs all vehicle operators. In addition, all vehicle operators report ungulates and predatory mammals seen along roads to the dispatcher. Regular data provided to Mine site personnel from the caribou satellite-collaring program are also used to track caribou movement and potential interactions with roads and Project facilities.

3.5 Historical Results

Road surveys commenced shortly following the onset of AWAR construction in 2007. Sampling intensity was comparable along the entire length of the AWAR from 2009 to 2018. From 2019 to 2024, sampling intensity has been steadily increasing from a survey every 2.6 days to a survey every 1.3 days on average. Surveys along the Vault Haul Road have been irregular since its completion but were included as part of regular AWAR surveys in 2016 and conducted separately beginning in 2017. Since beginning road surveys in 2007, the annual survey frequency completed along the AWAR has ranged from one survey completed every 6.1 days to one survey completed every 1.6 days with an average annual survey frequency of one survey completed every 4.1 days (Table 3-1). Surveys along the WTHR began in 2017 and have been conducted every 1.5 to every 7.7 days with an average annual survey frequency of every 3.4 days (Table 3-4. Survey frequency changes throughout the year based on caribou migration patterns and ungulate observations (see caribou decision trees, Agnico Eagle 2019), with surveys occurring every two days during sensitive seasons.

3.6 2024 Results

3.6.1 AWAR Surveys

The number of AWAR surveys completed each season in 2024 is provided in Table 3-1. The number of systematic road surveys completed in 2024 (n=277) is higher than the number of surveys completed the previous year (n=215), and considerably higher than the annual goal of 75 surveys. In 2024, surveys were conducted on average every 1.3 days and were conducted between 01 January and 31 December. The number of surveys completed was highest in the summer (n=82) and lowest in spring (n=41).As was mentioned earlier in report, this was the pilot year for lead caribou 10-day closure. During the closure, there may be several migrating caribou, however daily monitoring is not completed during these closures to reduce the number of vehicles on the road. If the largest number of caribou interacted with the road during the lead caribou closure and fewer interacted during the remainder of the season, this would drastically reduce the number of surveys conducted (i.e., if the GST is not exceeded, daily surveys are not conducted). This could also explain the average number of caribou observed per survey being lower, as most caribou interactions could have occurred during the 10-day closure. By month, the highest numbers of surveys were conducted in September and November, with November corresponding with the highest numbers of caribou observed within the LSA. Two Baker Lake HTO wildlife monitors completed road surveys regularly throughout the year (Section 1.6).

A total of 40,161 caribou were detected across 277 AWAR road surveys, and caribou were recorded in all seasons. Caribou were recorded during road surveys in every month, although only 9 caribou were observed in July. Caribou detections per survey were calculated by season (Table 3-2) and by month (Table 3-3).

The highest caribou observed per survey across months in 2024 occurred in November and December (Table 3-3). The November 2024 average caribou per survey was the second highest caribou count in November on record (636.4 caribou/survey), behind November 2022 (820.3 caribou/survey; Table 3-3).

Table 3-1: Details of All-Weather Access Road Wildlife Surveys from 2007 to 2024

Year	Annual range of surveys	Average Frequency[a]	Number of AWAR surveys				
			Spring[b]	Summer[b]	Fall[b]	Winter[b]	Annual Total
2007	Mar 01 – Dec 31	4.1 days	13	24	8	33	**78**
2008	Jan 02 – Dec 29	3.9 days	15	7	15	57	**94**
2009	Jan 09 – Dec 16	6.1 days	15	10	8	25	**58**
2010	Jan 21 – Dec 17	5.6 days	9	9	12	36	**66**
2011	Jan 10 – Dec 30	6.0 days	10	9	11	33	**63**
2012	Jan 04 – Dec 29	4.7 days	14	13	12	38	**77**
2013	Feb 02 – Dec 27	6.0 days	9	13	10	31	**63**
2014	Jan 12 – Dec 30	5.5 days	11	7	11	38	**67**
2015	Jan 03 – Dec 18	4.7 days	17	16	11	32	**76**
2016	Jan 02 – Dec 27	4.7 days	10	14	16	38	**78**
2017	Jan 03 – Dec 29	4.3 days	19	16	14	36	**85**
2018	Jan 03 – Dec 29	5.0 days	9	12	16	35	**72**
2019	Jan 04 – Dec 27	2.6 days	37	39	39	22	**137**
2020	Jan 17 – Dec 26	2.6 days	26	54	41	11	**132**
2021	Jan 01 – Dec 31	2.1 days	43	42	69	23	**177**
2022	Jan 02 – Dec 29	1.6 days	47	78	72	38	**235**
2023	Jan 07 – Dec 31	1.7 days	49	50	69	47	**215**
2024	Jan 01 – Dec 31	1.3 days	41	82	78	76	**277**

AWAR = All-Weather Access Road.

(a) Frequency refers to the average number of days between surveys over the year.

(b) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15, Winter = Dec 16 to Mar 31.

Table 3-2: Seasonal Caribou Counts and Detections per Survey on the All-Weather Access Road, 2007 to 2024

Year	Total Caribou Count					Caribou Detections per Survey				
	Spring[(a)]	Summer[(a)]	Fall[(a)]	Winter[(a)]	Annual	Spring[(a)]	Summer[(a)]	Fall[(a)]	Winter[(a)]	Annual
2007	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-
2009	1,224	649	628	1,238	3,739	81.6	64.9	78.5	49.5	64.5
2010	756	283	13,850	114	15,003	84	31.4	1,154.2	3.2	227.3
2011	1,586	1,808	2,538	76	6,008	158.6	200.9	230.7	2.3	95.4
2012	655	256	3,545	1,093	5,549	46.8	19.7	295.4	28.8	72.1
2013	230	335	2,509	930	4,004	25.6	25.8	250.9	30	63.6
2014	690	36	8,897	635	10,258	62.7	5.1	808.8	16.7	153.1
2015	1,676	611	8,485	148	10,920	98.6	38.2	771.4	4.6	143.7
2016	580	190	659	134	1,563	58	13.6	41.2	3.5	20
2017	21	90	741	45	897	1.1	5.6	52.9	1.2	10.6
2018	4,688	1,821	1,939	195	8,643	520.9	151.8	121.2	5.6	120
2019	19,706	445	21,078	10	41,239	532.6	11.4	540.5	0.5	301
2020	7,510	18,539	16,334	861	43,244	288.8	343.3	398.4	78.3	327.6
2021	14,661	2,670	16,062	4,432	37,825	341	63.6	232.8	192.7	213.7
2022	803	1,466	46,708	1,116	50,093	17.1	18.8	648.7	29.4	213.2
2023	31,314	1,061	19,048	3,517	54,940	639.1	21.2	276.1	74.8	255.5
2024	2,510	3,975	27,995	5681	40,161	61.2	48.5	358.9	74.8	145.0

AWAR = All-Weather Access Road; "-" = data unavailable.

(a) Frequency refers to the average number of days between surveys over the year.

(b) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15, Winter = Dec 16 to Mar 31.

Table 3-3: Monthly Counts of Caribou Observed per Survey Trip Along the All-Weather Access Road from 2007 to 2024

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2007	0	0	11.4	14	15.4	7.1	1.5	1.1	10.8	18.4	72.4	18.4
2008	14.3	11.5	11.4	12.7	12.1	3.5	13.3	5.4	12.5	44.3	90.7	10.3
2009	12	10.7	16.7	11.4	13	8.2	0	3.6	8.5	25.4	13	11
2010	5.3	4.1	6.7	10.8	18	9	1.1	5.6	4.8	197.2	106	7.9
2011	3	1	6	34	25.3	12.5	1	63	10.3	71.6	2.3	7.8
2012	5.1	5.3	6	15.2	14.2	3.1	0	1	1	60	116.5	169.7
2013	0	68.1	39.8	0	11	5.3	0	1	6.5	6	455.2	16.8
2014	3.2	10.5	10.5	27.2	8.4	1.5	0	1	33.1	101.8	48.4	17.6
2015	5.8	7	14.4	22.4	14.1	6.3	2	3	12.3	41.5	148.9	275
2016	3.7	2.3	6	23.8	13.2	6.9	0	2.7	3.3	73	2	15.7
2017	8	0	3.5	4	0	1	0	3.4	5.3	63.3	12.6	5.4
2018	6.4	12.3	14.4	51.4	27.7	12.3	1	23.4	23.7	38.8	40.6	1
2019	0	0	6	77.6	22.8	5.7	1	1.3	1	145.8	79	4
2020	0	0	107.6	263.2	430	52	0	185.2	483.9	485.7	556	2.3
2021	0	3	34.6	414.7	226.6	26.4	0.3	161.3	30.7	64.5	35.6	553.5
2022	44.8	48.8	7.5	23.8	8	8.6	32.6	9.2	32.1	756.9	820.3	0.3
2023	0	0	17.8	850.7	221.6	23.2	0	0.1	0.7	331.9	379.8	150
2024	57.4	44	117.8	51.8	65.2	11.9	0.7	30.1	91.7	163.9	636.4	226.9
Average	9.4	12.7	24.3	106.0	63.7	11.4	3.0	27.9	42.9	149.4	200.9	83.0

Note: Data show the average number of caribou observed for a month of the year, including data from all road surveys completed that month. Data are based on the observed number, which might be more inaccurate for larger groups or groups that are further away.

3.6.2 WTHR Surveys

Survey routes were separated into the Vault and Whale Tail segments of the WTHR until 2019 but were analyzed as a single unit (WTHR) starting in 2020. In 2024 there were 194 surveys conducted between 01 January and 31 December with a survey being conducted every 1.9 days on average (Table 3-4). The number of surveys conducted in 2024 was lower than the number conducted in 2023, but higher than the number conducted in any other previous years. In 2024, the fewest number surveys were conducted in winter and the greatest number of surveys occurred during spring (Table 3-4).

A total of 16,007 caribou were detected across 194 WTHR surveys in 2024, which was the third highest total since 2017 (Table 3-5; Figure 3-1). Caribou detections per survey were calculated by season (Table 3-5) and by month (Table 3-6).

The majority of caribou sightings along the WTHR were observed in April corresponding with spring migration, with a total of 9,554 caribou observed and an average of 398.1 caribou sightings per survey (Table 3-6). November had the second highest caribou sighting per survey that was observed in 2024 with 219.7 caribou sightings per survey. Caribou were detected along the WTHR during every month in 2024. Only April, May, July, and November detected more than 10 average caribou per survey in 2024 (Table 3-6). When comparing the same month across years, November and July of 2024 had the highest average caribou counts on record, and April had the second highest average caribou counts on record behind April 2023 (Table 3-6).

Table 3-4: Details of Whale Tail Haul Road Surveys from 2017 to 2024

Year	Annual range of surveys	Average Frequency[a]	Number of WTHR surveys				
			Spring[b]	Summer[b]	Fall[b]	Winter[b]	Annual Total
2017	Jan 03 – Dec 29	7.7 days	9	7	7	24	**47**
2018	Jan 30 – Dec 30	5.7 days	4	1	7	47	**59**
2019	Jan 08 – Dec 23	2.0 days	62	39	45	27	**173**
2020	Jan 07 – Dec 26	2.2 days	47	50	32	32	**161**
2021	Jan 10 – Dec 31	2.5 days	48	26	49	21	**144**
2022	Jan 02 – Dec 28	1.9 days	59	66	44	24	**193**
2023	Jan 05 – Dec 30	1.5 days	73	64	69	36	**242**
2024	Jan 01 – Dec 31	1.9 days	53	52	49	40	**194**

WTHR = Whale Tail Haul Road.

(a) Frequency refers to the average number of days between surveys over the year.

(b) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15, Winter = Dec 16 to Mar 31.

Table 3-5: Seasonal Caribou Counts and Detections per Survey on the Whale Tail Haul Road, 2017 to 2024

Year	Total Caribou Count					Caribou Detections per Survey				
	Spring[a]	Summer[a]	Fall[a]	Winter[a]	Annual	Spring[a]	Summer[a]	Fall[a]	Winter[a]	Annual
2017	5	5	10	5	25	0.6	0.7	1.4	0.2	0.5
2018	787	193	2,549	7	3,536	196.8	193.0	364.1	0.1	59.9
2019	53,201	7,391	6,819	45	67,456	858.1	189.5	151.5	1.7	389.9
2020	9,153	298	94	560	10,105	194.7	6.0	2.9	17.5	62.8
2021	10,549	1,047	304	28	11,928	219.8	40.3	6.2	1.3	82.8
2022	4,521	1,487	259	88	6,355	76.6	22.5	5.9	3.7	32.9
2023	30,789	3,050	1,923	101	35,863	421.8	47.7	27.9	2.8	148.2
2024	11,403	538	3,956	110	16,007	215.2	10.3	80.7	2.8	82.5

WTHR = Whale Tail Haul Road.

(a) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15, Winter = Dec 16 to Mar 31.

Table 3-6: Average Monthly Counts of Caribou Observed per Survey Trip Along the Whale Tail Haul Road from 2017 to 2024

Year	Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017[(a)]	Vault	0	5	9	5	0	0	0	0	3	0	6	0
2018	Whale Tail	0	0	0	120.4	0	0	8.4	0	15.2	104.7	18.3	13.5
2018	Vault	0	2	5	46.3	0	0	0	0	77	10	0	0
2019	Whale Tail	4	0	4	80	119.2	7.5	1.5	45	3	75.9	3.7	8.3
2019	Vault	0	0	89.2	27.9	0	0	0	0	0	0	0	0
2020	WTHR	1.3	2.8	64.3	235.1	523.8	5.8	0.3	7.4	6.2	0.3	8.6	2.4
2021	WTHR	0.3	0	0	164.7	304.2	59.5	0.5	49.7	25.1	4.1	6.3	2
2022	WTHR	4.1	7.1	1.3	115.7	14.6	6.7	0.2	36.3	9	6.7	7.1	0.3
2023	WTHR	0.7	0.1	6.4	635.6	181.2	26.5	0	85.3	19	64.8	4.4	2
2024	WTHR	4.9	1.8	2.9	398.1	56.9	5.8	25.4	4.1	0.9	3.8	219.7	8.1
	Average	1.5	1.9	18.2	182.9	120.0	11.2	3.6	22.8	15.8	27.0	27.4	3.7

Note: Data show the average number of caribou observed for a month of the year, including data from all surveys completed that month. Data are based on the observed number, which might be more inaccurate for larger groups or groups that are further away.

(a) Values provided for 2017 are raw counts and are not adjusted for survey effort. The number of surveys per month is not available to make this adjustment.

3.6.3 Caribou Counts along AWAR and WTHR

The total number of caribou observed in 2024 along the AWAR during road surveys were within the range observed between 2019 and 2024 (Figure 3-1). The total number of caribou observed along the WTHR in 2024 during road surveys was lower than the majority of observations from 2017 to 2023, with the exceptions of 2021 and 2022 (Figure 3-1). Note, total counts across years are not corrected for differences in sampling effort (i.e., the number of surveys), meaning that increases in caribou total counts may be a direct result of a higher number of surveys conducted annually.

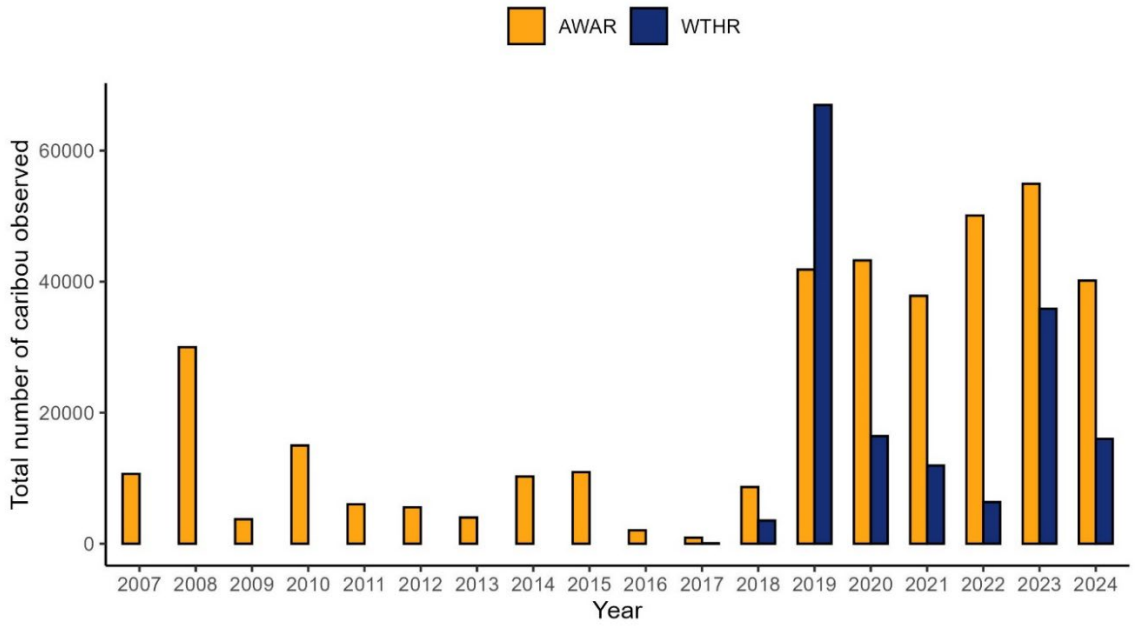


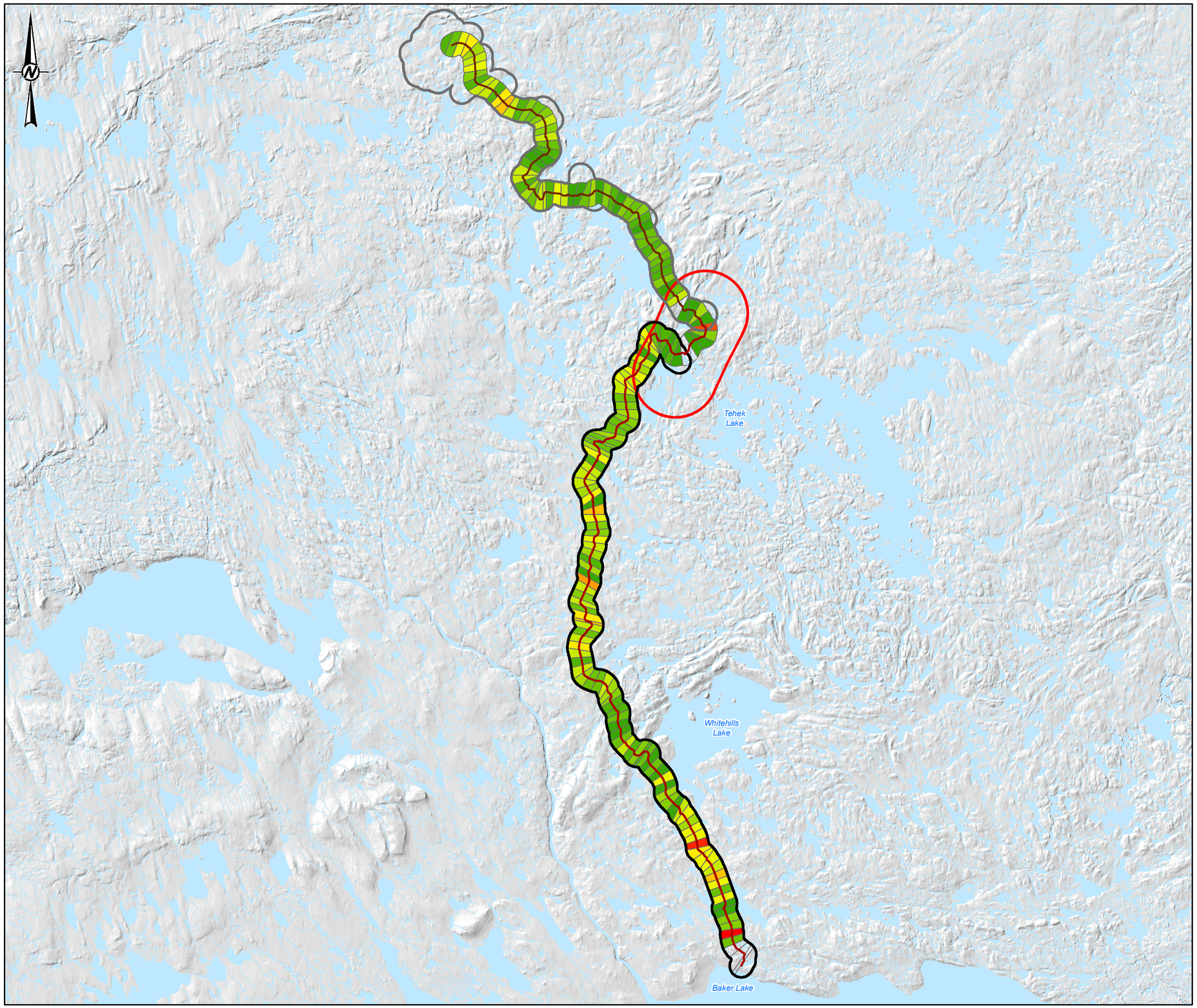
Figure 3-1: Total Number of Caribou Observed Each Year During All-Weather Access Road and Whale Tail Haul Road Surveys.

Maps were produced to depict the spatial variation of caribou counts along the AWAR and WTHR, summarized as the total number of caribou for each KM segment of road. Note, survey effort was not equal between the AWAR and WTHR in 2024 (277 AWAR surveys and 194 WTHR surveys), so caution should be taken when making comparisons between the two roads. Caribou observations determine the location and influence the frequency of road surveys. Caribou counts are shown for each segment of the AWAR and WTHR for 2024 for five different time intervals including year-round counts (Figure 3-2), spring and summer counts (Figure 3-3), and fall and winter counts (Figure 3-4). Considering both the AWAR and WTHR, caribou migration paths appear different across seasons with spring migration observed on both roads (primarily on the WTHR) and near the Meadowbank Complex and fall migration occurring primarily further south on the AWAR.

Year-round caribou counts along the AWAR varied substantially with totals ranging between 1 to 5,810 caribou for each 1-km section of road, though most kilometre sections had caribou counts fewer than 500 caribou (Figure 3-2). Along the AWAR, caribou counts were lowest near Whitehills Lake with caribou count annual median of 94 caribou from KMs 25 to 40. The highest counts were observed between KMs 6 to 23 between Baker Lake and Whitehills Lake where an average of 971 caribou were observed. In the spring there were few observations along AWAR, with an average of around 20 caribou per AWAR KM. The most caribou observations occurred between KMs 91 and 96 west of Tehek Lake and northwest of Whitehills Lake. There were between 24 to 187 caribou observed in the spring throughout these sections (Figure 3-3). During the summer months, caribou counts were relatively low along the AWAR, but caribou were still observed in most 1-km segments north of KM 19 (Figure 3-3). During the fall, caribou counts were more numerous in the southern portion of the AWAR, with a high-density pocket between KMs 6 to 19 (Figure 3-4). Low caribou counts persisted near the Meadowbank LSA and west of Whitehills Lake during the fall. Caribou counts were very low along the AWAR during the winter, but a small pocket of higher observations occurred northwest of Whitehills Lake between KM 52 to 57 (Figure 3-4).

Caribou distributions along the AWAR have changed across years. The 2019 analysis caribou counts revealed that from 2008 to 2019 the highest cumulative caribou counts along the AWAR occur in areas closest to the community of Baker Lake and south and north of Whitehills Lake (Agnico Eagle 2020). Road survey results from 2020 found a similar pattern of year-round distribution along the AWAR and identified the stretch of road from KMs 14 to 18 along the AWAR as a high-density congregation area for caribou, particularly in the summer and fall. The 2021 road survey data shows the opposite pattern with the lowest cumulative caribou counts occurring near Baker Lake across all seasons. The 2023 observations show similar patterns to the cumulative caribou counts prior to 2020, where the highest density of caribou were observed north of Baker Lake, west of Tehek and northwest of Whitehills Lake, which were repeated again in 2024 (Figure 3-2).

Annual caribou counts ranged between 0 and 1,961 along the WTHR with caribou detections in almost every 1-km segment of road (Figure 3-2). Caribou counts were generally higher at the northern and southern ends of the WTHR, especially at KM 113, which aligns with a high-density pocket near the south end of the WTHR pocket observed during 2020, 2021, and 2023 road surveys within the Meadowbank Complex. Caribou counts along the WTHR were highest in the spring (Figure 3-3). Conversely, caribou detections were very low in summer, fall, and winter along the WTHR and only occurred at a few spots along the road (Figure 3-3, Figure 3-4).



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- WATERCOURSE
- WATERBODY

CARIBOU COUNT

- 1 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- 200 - 250
- 250 - 500
- 500 - 750
- 750 - 1000
- 1000 - 1250
- 1250 - 1500
- 1500 - 1750
- 1750 - 4000
- 4000 - 5000
- 5000 - 6000

*EMPTY SECTIONS REFLECT CARIBOU COUNT = 0

0 10 20
1:500,000 KILOMETRES

REFERENCE(S)
1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.
COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT
AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT
MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE
CARIBOU COUNTS ALONG THE ALL-WEATHER ACCESS ROAD AND WHALE TAIL HAUL ROAD, YEAR-ROUND (2024)

CONSULTANT
wsp

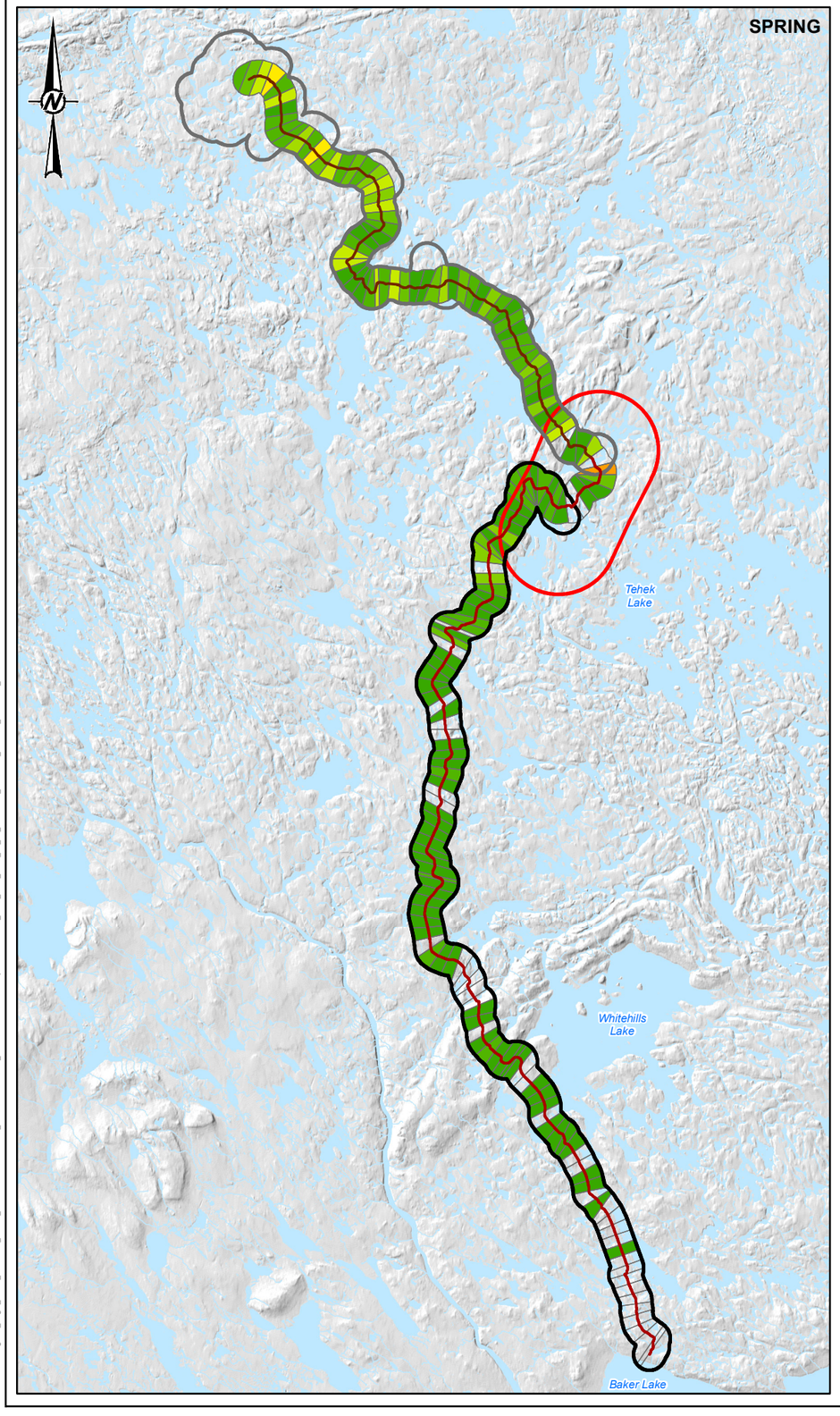
YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

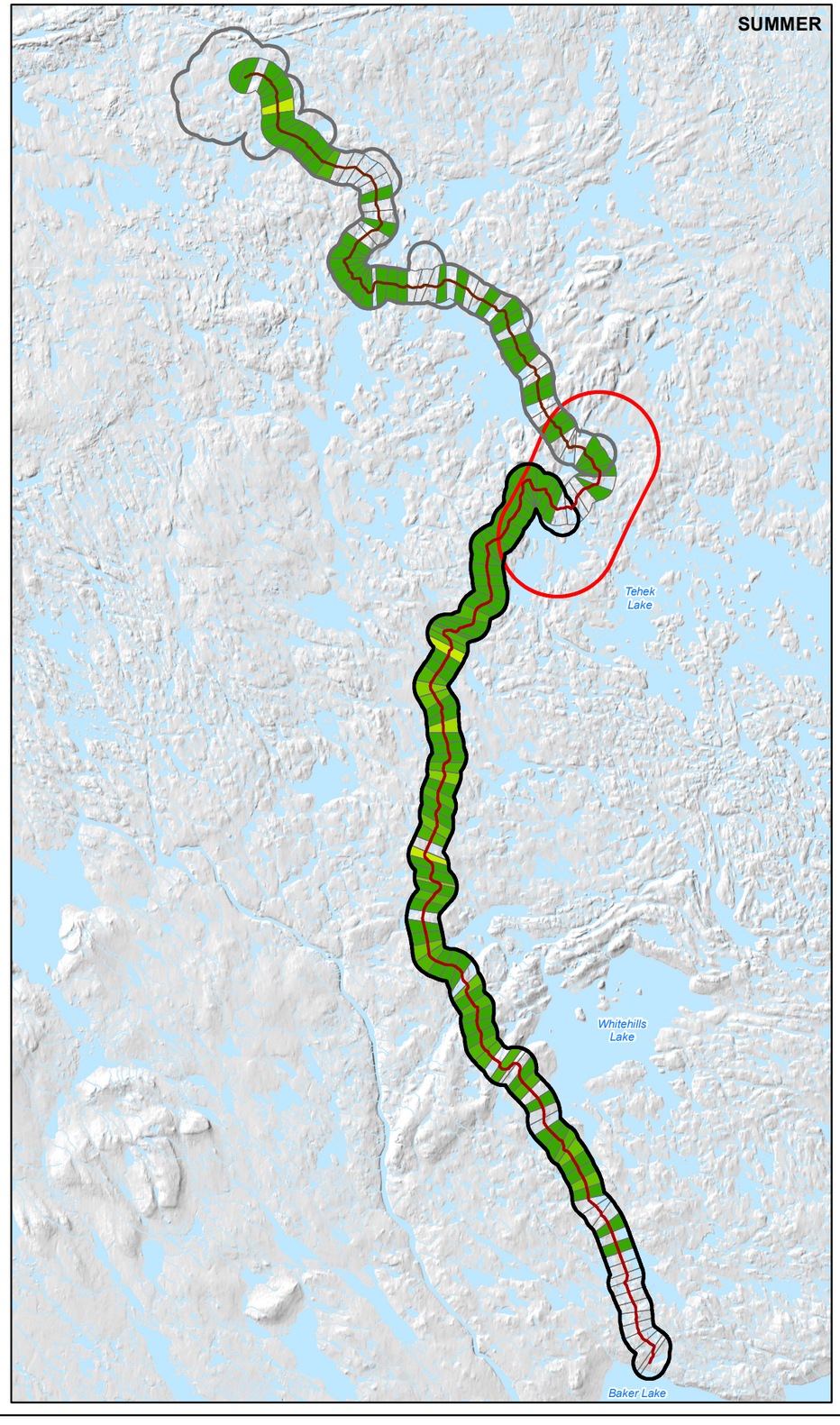
PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	3-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_03_02_CARIBOU_DENSITY_2024.mxd PRINTED ON: 2025-03-19 AT: 11:44:04 AM





LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- WATERCOURSE
- WATERBODY

CARIBOU COUNT

- 1 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- 200 - 250
- 250 - 500
- 500 - 750
- 750 - 1000
- 1000 - 1250
- 1250 - 1500
- 1500 - 1750
- 1750 - 4000
- 4000 - 5000
- 5000 - 6000

*EMPTY SECTIONS REFLECT CARIBOU COUNT = 0

0 10 20

1:500,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.
COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

CARIBOU COUNTS ALONG THE ALL-WEATHER ACCESS ROAD AND WHALE TAIL HAUL ROAD, SPRING-SUMMER (2024)

CONSULTANT

wsp

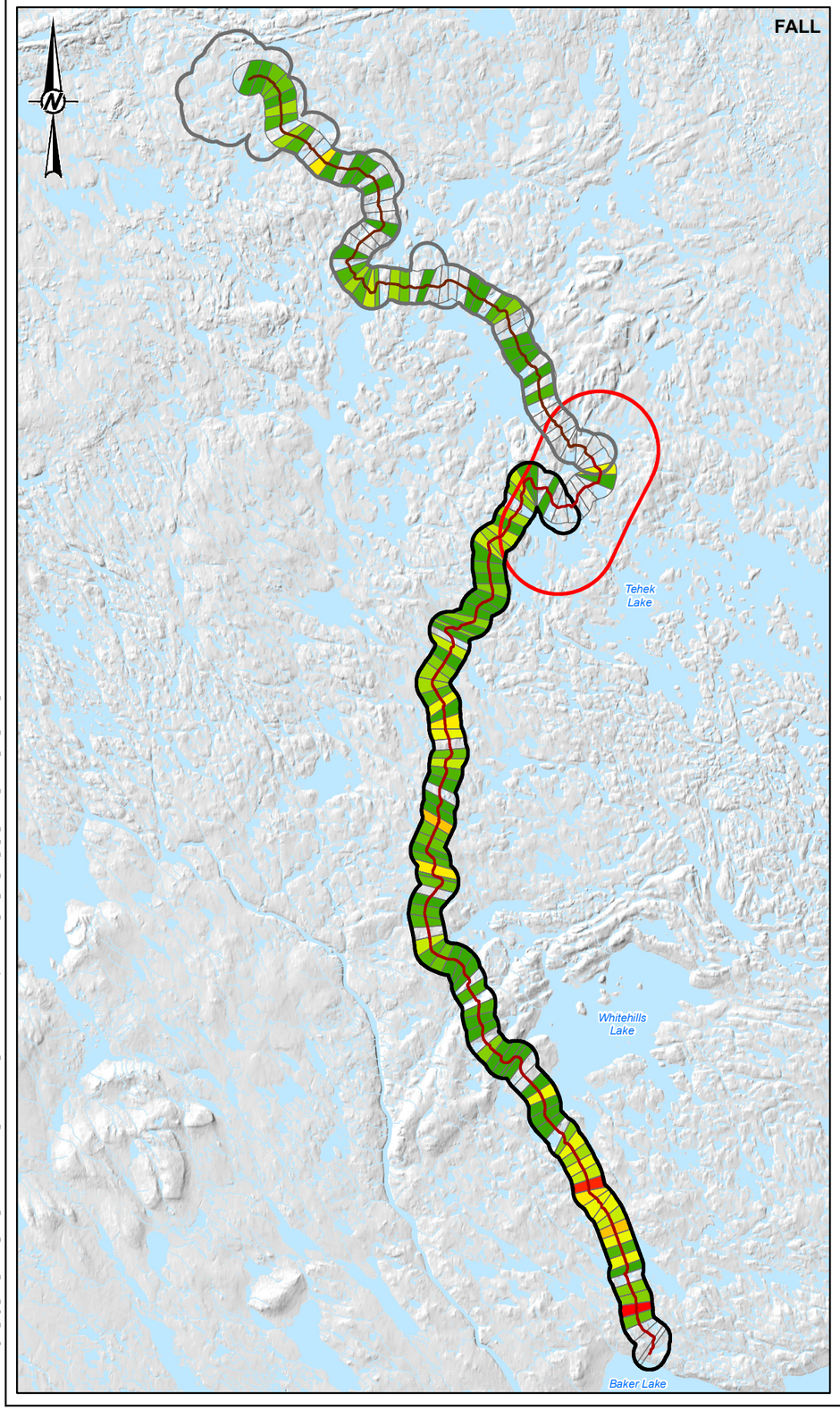
YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

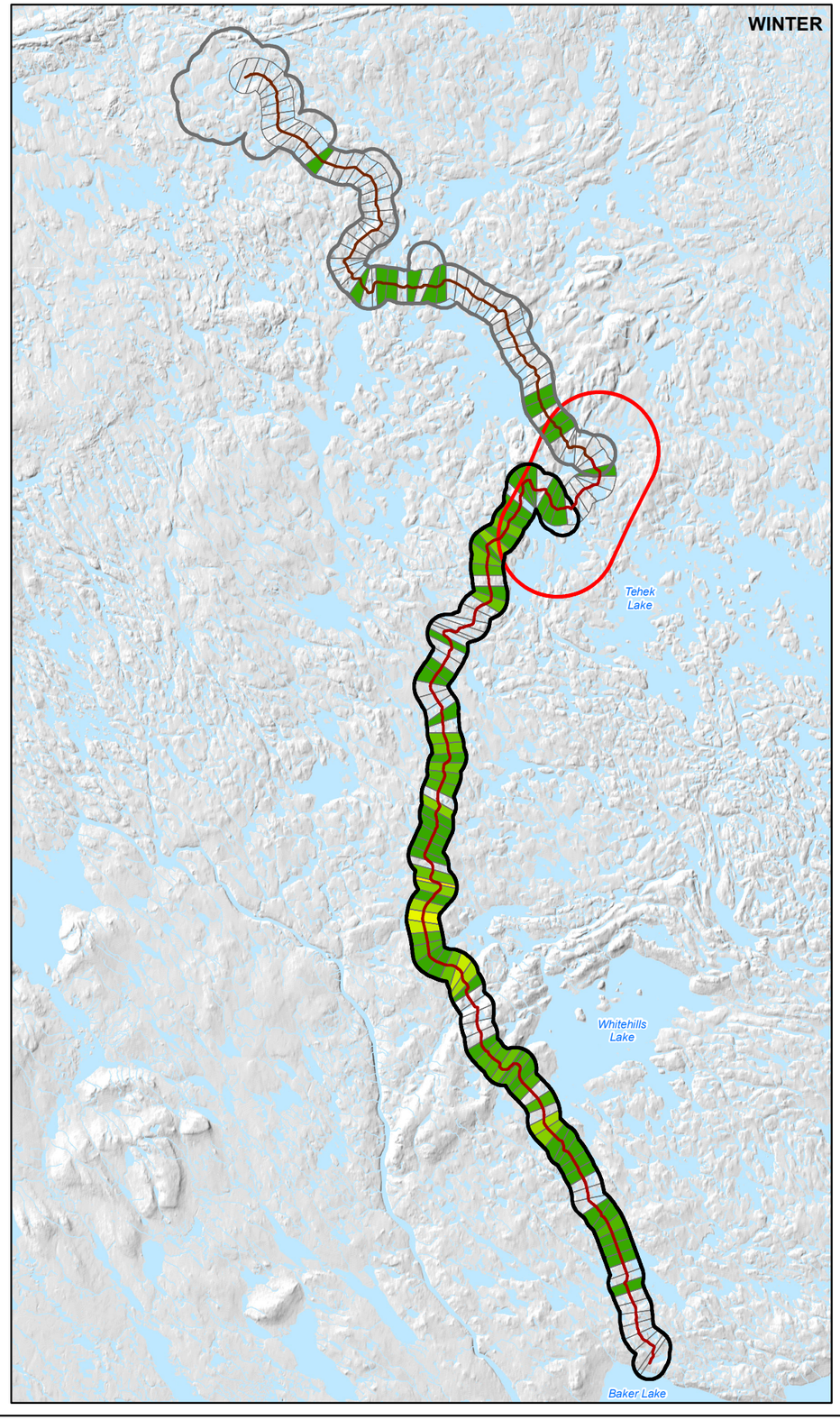
PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	3-3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604-4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_03_03_CARIBOU_DENSITY_SPRING_SUMMER_2024.mxd PRINTED ON: 2025-03-19 AT: 11:47:22 AM





LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- WATERCOURSE
- WATERBODY

CARIBOU COUNT

- 1 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- 200 - 250
- 250 - 500
- 500 - 750
- 750 - 1000
- 1000 - 1250
- 1250 - 1500
- 1500 - 1750
- 1750 - 4000
- 4000 - 5000
- 5000 - 6000

*EMPTY SECTIONS REFLECT CARIBOU COUNT = 0

0 10 20

1:500,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.
COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

CARIBOU COUNTS ALONG THE ALL-WEATHER ACCESS ROAD AND WHALE TAIL HAUL ROAD, FALL-WINTER (2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	3-4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604-4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_03_04_CARIBOU_DENSITY_FALL_WINTER_2024.mxd PRINTED ON: 2025-03-19 AT: 11:46:19 AM

3.6.3.1 Group Size Threshold Calculation

Spring and fall GST for 2025 were calculated using 2024 caribou road survey data as well as historical data (Table 3-8). A GST is defined as the group size at, or above which, 75% of caribou observed interacting with Project infrastructure are expected to occur (Agnico Eagle 2019). Observations of caribou within 250 m of the road or greater than 1,000 m away from the road were excluded, based on methodology provided by GN (GN 2021). Spring and fall 2024 caribou road survey observations were grouped by season and observations were pooled between the AWAR and WTHR. The number of groups (i.e., number of observations), average group size, group size range, and 75th percentiles were summarized per season in Table 3-7. Spring and fall GSTs for 2025 were calculated by averaging GSTs for the corresponding season across all years with at least 100 caribou groups observed for that season. Variation due to low samples sizes may result in biased GSTs, and GST estimates were considered accurate (unbiased) if there were at least 100 groups observed for a season. There were seven years of spring data with at least 100 caribou group observations (2008, 2018, 2019, 2020, 2021, 2023, and 2024; Table 3-7), and spring GSTs were averaged across those seven years to calculate a spring 2025 GST of 35 caribou (Table 3-8). There were five years of fall data with at least 100 caribou group observations (2008, 2019, 2022, 2023, and 2024; Table 3-7), and fall GSTs were averaged across those five years to calculate a fall 2025 GST of 86 caribou (Table 3-8). For the purpose of calculating thresholds, GSTs were rounded down to the nearest whole number.

Table 3-7: Caribou group observation sample sizes for spring and fall road surveys, 2007-2024

Year	Sample Size[a]		Location[b]	Group Size 75th Percentile Spring	Group Size 75th Percentile Fall
	Spring	Fall			
2007	9	57	AWAR	N/A	N/A
2008	163	143	AWAR	12	100
2009	21	14	AWAR	N/A	N/A
2010	28	34	AWAR	N/A	N/A
2011	38	23	AWAR	N/A	N/A
2012	24	21	AWAR	N/A	N/A
2013	27	9	AWAR	N/A	N/A
2014	33	60	AWAR	N/A	N/A
2015	65	43	AWAR	N/A	N/A
2016	31	10	AWAR	N/A	N/A
2017	4	16	AWAR	N/A	N/A
2018	114	41	AWAR and WTHR	30	N/A
2019	437	127	AWAR and WTHR	60	125
2020	251	55	AWAR and WTHR	34	N/A
2021	373	63	AWAR and WTHR	31	N/A
2022	81	108	AWAR and WTHR	N/A	54
2023	577	156	AWAR and WTHR	55	75
2024	255	132	AWAR and WTHR	26	80

(a) Sample size refers to the number of caribou groups observed during road surveys for a given year and season. A minimum of 100 observations is required for the season and year to be included in group size threshold (GST) calculations.

(b) AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

N/A = not applicable.

Table 3-8: Caribou GST summaries for spring and fall based on 2024 data

Season[a]	Number of Observations[b]	Average group size	Group size range	Group size 75th percentile	Calculated GSTs for 2025[c]
Spring	255	27.4	1-400	26	**35**
Fall	132	88.3	1-950	80	**86**

(a) 2024 caribou observations were summarized for the two sensitive seasons, spring and fall.

(b) GSTs are considered unbiased when calculated using observations of at least 100 caribou groups.

(c) GSTs for 2025 were calculated by taking the average of all group size thresholds across years for a given season that meet the minimum sample size requirement (n=100).

GST = group size threshold.

3.6.4 Wildlife Observations Along the AWAR and WTHR

Eight mammalian species and fifteen avian species (five species could not be identified to an individual species) were detected and identified during road surveys in 2024 (Table 3-9). Six mammal species were observed at both AWAR and WTHR, including Arctic fox (*Vulpes lagopus*), Artic ground squirrel (*Urocitellus parryii*), Arctic hare (*Lepus articus*), caribou, muskox, and wolf (*Canis lupus*). Wolverine (*Gulo* gulo) was only observed at AWAR and northern red-backed vole (*Clethrionomys rutilus*) was only observed at WTHR. Caribou and muskox were the most frequently observed mammals. Eleven avian species were observed at both sites including Canada goose (*Branta canadensis*), common raven (*Corvus corvax*), greater white-fronted goose (*Anser albifrons*), gull sp. (*Larinae* sp.), gyrfalcon (*Falco rusticolus*), peregrine falcon (*Falco peregrinus*), ptarmigan sp. (*Lagopus* sp.), rough-legged hawk (*Buteo lagopus*), sandhill crane (*Antigone canadensis*) and snow goose (*Chen caerulescens*). Bald eagle (*Haliaeetus leucocephalus*) and swan (*Cygnus* sp.) were only observed at AWAR. An unidentified duck, Ross's goose (*Answer rossii*) and an unidentified bird species were only observed at WTHR. At both AWAR and WTHR Snow geese were the most frequently observed species.

Seven mammalian species and twelve avian species were detected and identified incidentally on the AWAR and WTHR in 2024 (Table 3-10). Arctic ground squirrel was only observed on the AWAR. The remainder of the mammalian species observed were recorded on both roads, including Arctic fox, Arctic hare, caribou, muskox, wolf and wolverine. On both roads, caribou and muskox were the most frequently observed species. Snow goose was the most common avian species observed on the AWAR and Canada goose was the most common avian species observed at WTHR. Snowy owl (*Bubo scandiacus*) was the only species observed incidentally that was not observed during road surveys.

Table 3-9: Species Detected During Road Surveys at All-Weather Access Road and Whale Tail Haul Road in 2024 by Month

Species Group	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AWAR														
Mammal	Arctic fox	0	2	1	5	7	21	19	12	6	7	6	3	89
	Arctic ground squirrel	0	0	0	0	9	4	14	4	6	0	0	0	37
	Arctic hare	0	1	1	7	10	4	5	5	18	0	0	1	52
	Caribou	1,434	748	2,474	984	1,761	297	9	422	3,025	4,425	18,457	6,125	40,161
	Muskox	99	56	322	80	48	194	168	136	171	313	486	559	2,632
	Wolf	0	2	0	0	0	0	0	5	0	0	7	5	19
	Wolverine	0	1	0	0	0	0	0	0	0	0	0	0	1

Table 3-9: Species Detected During Road Surveys at All-Weather Access Road and Whale Tail Haul Road in 2024 by Month

Species Group	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Bird	Bald eagle	0	0	0	0	0	3	1	3	0	0	0	0	7
	Canada goose	0	0	0	0	0	74	0	86	29	0	0	0	189
	Common raven	1	0	4	4	0	0	0	0	0	0	1	0	10
	Greater white-fronted goose	0	0	0	0	4	0	0	0	0	0	0	0	4
	Gull sp.	0	0	0	0	45	0	0	0	0	0	0	0	45
	Gyrfalcon	0	0	0	0	2	0	0	0	0	0	0	0	2
	Peregrine falcon	0	0	0	0	13	4	1	8	2	0	0	0	28
	Ptarmigan sp.	1	11	6	24	404	8	0	22	11	83	41	0	611
	Rough-legged hawk	0	0	0	1	1	0	0	0	0	0	0	0	2
	Sandhill crane	0	0	0	0	210	3	8	13	0	0	0	0	234
	Snow goose	0	0	0	0	679	56	0	51	2,004	0	0	0	2,790
	Swan sp.	0	0	0	0	0	13	0	0	0	0	0	0	13
WTHR														
Mammal	Arctic fox	1	0	1	1	2	0	1	1	0	0	1	2	10
	Arctic ground squirrel	0	0	0	0	5	0	2	2	0	0	0	0	9
	Arctic hare	2	0	0	1	5	2	2	4	0	0	0	0	16
	Caribou	69	18	23	9,554	1,933	70	305	70	9	60	3,735	161	16,007
	Muskox	136	162	69	115	83	290	133	167	43	136	141	108	1,583
	Red-backed vole	0	0	0	0	0	0	1	0	0	0	0	0	1
	Wolf	6	3	0	0	1	0	1	0	0	8	0	0	19
Bird	Canada goose	0	0	0	0	26	35	0	73	7	0	0	0	141
	Common raven	1	0	1	0	0	0	0	0	0	0	0	9	11
	Unidentified duck	0	0	0	0	4	0	0	0	0	0	0	0	4
	Greater white-fronted goose	0	0	0	0	45	0	0	0	0	0	0	0	45
	Gull sp.	0	0	0	0	0	5	0	0	0	0	0	0	5
	Gyrfalcon	0	0	0	0	4	0	0	1	0	0	0	0	5
	Peregrine falcon	0	0	0	0	1	0	0	1	2	0	0	0	4
	Ptarmigan sp.	0	0	0	7	5	0	0	0	0	4	0	12	28
	Ross's goose	0	0	0	0	95	0	0	0	0	0	0	0	95
	Rough-legged hawk	0	0	0	0	4	0	0	0	0	1	0	0	5
	Sandhill crane	0	0	0	0	9	1	2	9	0	0	0	0	21
	Snow goose	0	0	0	0	253	0	0	0	0	0	0	0	253
	Unidentified bird	0	0	0	0	20	0	0	0	0	0	0	0	20

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

Table 3-10: Species Detected Incidentally at All-Weather Access Road and Whale Tail Haul Road in 2024 by Month

Species Group	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AWAR														
Mammal	Arctic fox	2	0	2	5	4	5	8	5	0	3	0	1	35
	Arctic ground squirrel	0	0	0	0	18	2	0	2	0	0	0	0	22
	Arctic hare	0	2	1	0	1	1	0	0	0	0	0	0	5
	Caribou	455	420	1,003	2,012	1,569	101	3	235	961	6,763	5,755	1,731	21,008
	Muskox	8	85	228	214	47	134	69	73	118	238	119	141	1,474
	Wolf	0	3	3	0	0	1	1	1	0	1	0	1	11
	Wolverine	0	0	0	1	0	0	0	0	1	0	0	0	2
Bird	Falcon sp.	0	0	0	0	2	0	0	0	0	0	0	0	2
	Gyrfalcon	0	0	0	0	1	0	0	0	0	0	0	0	1
	Peregrine falcon	0	0	0	0	8	2	0	0	0	0	0	0	10
	Ptarmigan sp.	0	3	0	17	2	1	0	11	0	0	0	0	34
	Rough-legged hawk	0	0	0	1	2	0	0	0	0	0	0	0	3
	Sandhill crane	0	0	0	0	26	0	0	0	0	0	0	0	26
	Snow goose	0	0	0	0	114	0	0	0	0	0	0	0	114
	Snowy owl	0	0	0	0	0	0	1	0	1	1	0	0	3
	Swan	0	0	0	0	0	17	0	0	0	0	0	0	17
WTHR														
Mammal	Arctic fox	2	0	0	0	1	1	1	0	0	0	1	1	7
	Arctic hare	0	0	0	0	1	0	0	0	0	0	1	0	2
	Caribou	34	15	13	4,732	350	75	793	160	19	179	1,274	86	7,730
	Muskox	96	112	138	44	29	168	124	77	84	66	0	17	955
	Wolf	0	2	0	2	0	1	0	0	0	1	6	0	12
	Wolverine	0	0	0	0	0	0	0	0	0	0	1	0	1
Bird	Canada goose	0	0	0	0	0	0	39	0	0	0	0	0	39
	Common raven	0	0	0	0	0	0	0	0	0	0	0	1	1
	Falcon sp.	0	0	0	0	2	0	0	0	0	0	0	0	2
	Peregrine falcon	0	0	0	0	1	3	0	0	0	0	0	0	4
	Sandhill crane	0	0	0	0	5	2	0	0	0	0	0	0	7
	Snow goose	0	0	0	0	8	8	0	0	0	0	0	0	16
	Unidentified duck	0	0	0	0	3	0	0	0	0	0	0	0	3

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

3.6.5 Road-related Mitigation

Road-related monitoring and mitigation were implemented according to decision tree Figures 7 and 8 of the TEMP version 7 (Agnico Eagle 2019). Collar location maps were useful in assessing the need for increased road monitoring. Road-related mitigation related to caribou presence in 2024 resulted in road closures and a corresponding reduction in total vehicle movements (Section 3.6.7). Outside of the fall migration period, road closures were implemented, or vehicle movements were restricted (e.g., light vehicles only, speed limit enforced) in response to high caribou numbers.

Regular wildlife warnings were dispatched based on observation and monitoring data. The road supervisors and operators also ensured protection of wildlife by assisting in surveillance and closing roads as needed. Radio notices reminding operators of the appropriate speed limit were made frequently by dispatchers. During caribou peak migration, notices were sent to all road occupants, regulatory agencies, local groups, and wildlife consultants were notified, and road survey efforts were increased.

3.6.6 AWAR and WTHR Closures

Significant movements of caribou and muskox occurred along the AWAR throughout November and December 2024, resulting in multiple closures to Project-related traffic. The AWAR was closed (i.e., 24-hour closure) on 63 days in 2024, with 40 days due to caribou, 11 days due to weather, 2 days for maintenance, and 1 day for both caribou and maintenance (Table 3-11). The AWAR had closure days with less than 24 hours of closure on 81 occasions, including 38 closure days due to caribou (including day days of partial closure for caribou as well as other reasons; Table 3-11). In addition to the GST related caribou closures, there was also a lead caribou 10-day closure, therefore road closures occurred due to caribou for 50 days in total (Table 3-11). In total, the AWAR was closed for a total of 2,396 hours in 2024, with the highest number of closure hours reported in April, November, and December due to caribou migration (Table 3-12). Speed restrictions were applied on 83 days on the AWAR and were applied in response to caribou or muskox presence (Table 3-11). In total, there were 200 days in 2024 (i.e. 54.6% of the year) with road closures and restrictions applied on the AWAR in response to caribou or muskox (Table 3-11). Full summaries of AWAR road closures, restrictions, and reason for reopening are available in Appendix B in Table B-1.

The WTHR was fully closed (i.e., 24-hour closure) on 24 days, with 22 closure days due to caribou (including the lead caribou 10-day closure) and 2 closure days due to weather (Table 3-11). On 40 days, the WTHR experience closures occurring for less than 24 hours, with 11 closure days related to wildlife (Table 3-11). In total, the WTHR was closed for a total of 888 hours in 2024, with the highest number of closure hours reported in April and November due to caribou migration and January due to weather (Table 3-12). Speed restrictions were applied on 77 days on the WTHR, all of which were applied in response to caribou and/or muskox presence (Table 3-11). Traffic restrictions were applied on the WTHR on 33 days, most of which occurred in September and October (Table 3-11). In total, there were 57 days in 2024 with road closures and restrictions applied on the WTHR in response to caribou and/or muskox (Table 3-11). Full summaries of WTHR road closures, restrictions, and reasons for reopening are available in Appendix B in Table B-2.

Table 3-11: Number of Road Closures and Restrictions Implemented Along the All-Weather Access Road and Whale Tail Haul Road, 2024

Closure Status	Cause	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AWAR														
Closure 24 hours	10 Days Closure	-	-	1	8	-	-	-	-	-	-	-	-	9
	Caribou	-	-	-	5	1	-	-	-	3	5	14	12	40
	Maintenance	-	-	-	1	1	-	-	-	-	-	-	-	2
	Maintenance/ Caribou[(b)]	-	-	-	-	1	-	-	-	-	-	-	-	1
	Weather	3	1	5	1	-	-	-	-	-	-	-	1	11
Closure < 24 hours	10 Days Closure	-	-	1	-	-	-	-	-	-	-	-	-	1
	Caribou	1	-	-	5	11	-	-	2	4	5	2	5	35
	Cyanide Convoy	-	-	-	-	-	-	3	-	-	-	-	-	3
	Maintenance	-	-	-	-	1	-	-	-	-	-	-	-	1
	Maintenance/ Caribou[(a)]	-	-	-	-	1	-	-	-	-	-	-	-	1
	Other	-	-	-	-	-	-	-	-	2	2	-	1	5
	Weather	7	10	6	3	-	-	-	-	2	4	-	2	34
	Weather/ Caribou[(b)]	-	-	-	-	1	-	-	-	-	-	-	-	1
Speed Restriction	Caribou	12	5	3	4	10	9	-	2	5	2	1	1	54
	Muskox	-	2	1	-	-	10	6	-	-	4	4	2	29
Traffic Restriction[(a)]	Caribou	6	6	12	-	1	-	-	-	3	-	-	1	29
	Maintenance	-	-	-	-	-	-	-	-	-	1	-	-	1
	Weather	-	-	-	2	-	-	-	-	4	2	5	1	14
WTHR														
Closure 24 hours	10 Days Closure	-	-	-	10	-	-	-	-	-	-	-	-	10
	Caribou	-	-	-	8	1	-	-	-	-	-	3	-	12
	Weather	1	-	1	-	-	-	-	-	-	-	-	-	2
Closure < 24 hours	Caribou	-	-	-	4	3	-	2	-	-	-	1	1	11
	Weather	7	5	2	2	-	-	-	-	2	6	1	4	29
Speed Restriction	Caribou	1	1	1	2	7	1	-	9	-	1	2	1	26
	Muskox	6	10	4	1	-	16	6	-	-	3	2	3	51
Traffic Restriction[(a)]	Caribou	-	-	-	-	-	-	-	2	-	-	-	-	2
	Weather	1	-	-	-	2	-	-	-	13	10	4	1	31

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

(a) Traffic restricted to light vehicles only.

(b) Road closures occurred for different reasons throughout the day.

Table 3-12: Number of Road Closure Hours Due to Ungulate Activity, Weather, or Maintenance Along the All-Weather Access Road and Whale Tail Haul Road, 2024.

Closure Status	Cause	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AWAR														
	10 Days Closure	-	-	33	192	-	-	-	-	-	-	-	-	225
Closure 24 hours	Caribou	-	-	-	120	24	-	-	-	72	120	336	288	960
	Maintenance	-	-	-	24	24	-	-	-	-	-	-	-	48
	Maintenance/ Caribou[(a)]	-	-	-	-	24	-	-	-	-	-	-	-	24
	Weather	72	24	120	24	-	-	-	-	-	-	-	24	264
Closure < 24 hours	Caribou	2	-	-	56	130	-	-	23	53	60	29	75	428
	Cyanide Convoy	-	-	-	-	-	-	12	-	-	-	-	-	12
	Maintenance	-	-	-	-	12	-	-	-	-	-	-	-	12
	Maintenance/ Caribou[(a)]	-	-	-	-	6	-	-	-	-	-	-	-	6
	Other	-	-	-	-	-	-	-	-	12	22	-	1	35
	Weather	71	121	55	32	-	-	-	-	23	46	-	25	373
	Weather/ Caribou[(a)]	-	-	-	-	10	-	-	-	-	-	-	-	10
WTHR														
Closure 24 hours	10 Days Closure	-	-	-	216	-	-	-	-	-	-	-	-	216
	Caribou	-	-	-	216	24	-	-	-	-	-	72	-	312
	Weather	24	-	24	-	-	-	-	-	-	-	-	-	48
Closure < 24 hours	Caribou	-	-	-	-	23	-	22	-	-	-	12	16	72
	Weather	65	46	28	25	-	-	-	-	1	52	1	22	240

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

(a) Road closures occurred for different reasons throughout the day.

The percentage of observed caribou that encountered the AWAR when closed was 80% during spring (4,710 of 5,902 caribou observed in spring) and 98% in fall (41,133 of 41,897 caribou observed in fall; Table 3-13). The percentage of observed caribou that encountered the WTHR when closed was 95% during the spring (15,598 out of 16,480 caribou observed in spring) and 87% during the fall (4,796 of 5,488 caribou observed in fall; Table 3-13). Percentages were calculated based on the sum of caribou counts on each road based on closure status for the day of observation (i.e., open versus closure), with both 24-hour closures and less than 24-hour closures considered together for the purpose of this calculation. For both roads and in both seasons, the GST target of 75% was exceeded.

Table 3-13: Percentage of Caribou Encountering Closed Roads

Road	Season	Number of Caribou Encountering Closed Roads	Total Caribou Observations	Percentage of Caribou Encountering Closed Road
AWAR	Spring	4,710	5,902	79.8
	Summer	4,086	5,294	77.18
	Fall	41,133	41,897	98.18
	Winter	3,092	8,076	38.29
	Annual	53,021	61,169	86.7
WTHR	Spring	15,598	16,480	94.65
	Summer	1,093	1,590	68.74
	Fall	4,796	5,488	87.39
	Winter	47	179	26.26
	Annual	21,534	23,737	90.7

AWAR = All Weather Access Road, WTHR = Whale Tail Haul Road.

3.6.7 Traffic Data

Total one-way traffic along the AWAR in 2024 included 114 heavy equipment, 14,146 medium equipment, and 6,873 light equipment vehicles for a total of 21,133 vehicles (Table 3-14). Heavy equipment refers to haul trucks, long haul trucks, medium equipment refers to tankers, graders, snowplows, cement trucks, fuel trucks, tractor-trailers, and other similar sized vehicles, and light equipment refers to pick-up trucks, bus, water trucks, cube trucks, and other similar sized vehicles. Total traffic along the WTHR included 63,718 heavy equipment, 5,786 medium equipment, and 2,278 light equipment vehicles, for a total of 71,782 vehicles (Table 3-15). Total traffic along the AWAR was about 13% lower in 2023 (n= 24,288) than the 2024 total of vehicles, and traffic along the WTHR was 9% higher in 2023 (n=65,973) compared to the vehicles in 2024 (WSP 2024). Monthly vehicle traffic for the AWAR and WTHR fluctuated throughout the year (Figure 3-5). Lowest traffic rates on the AWAR occurred in November, and highest traffic rates occurred in June through August (Table 3-14; Figure 3-5). On the WTHR, lowest traffic rates were recorded in April, and highest traffic rates were recorded in June (Table 3-15; Figure 3-5). Caribou counts for the month of April were high along the WTHR and for the month of November along the AWAR (Table 3-9), which coincided with spring and fall migration and the lowest traffic rates.

During periods of road closures or Level 3 status, a daily meeting is held with all departments to validate the essential needs requiring access to the roads. From this meeting, departure time, departure location, and the list of vehicles authorized to travel on the road will be determined. Only essential vehicles (vehicles operated for the purpose of maintaining the safety of personnel, Emergency Response Team (ERT), security and wildlife monitoring) are permitted in convoys per the TEMP (Agnico Eagle 2019). Environment personnel will meet the vehicles at agreed upon time and departure location and validate the list of authorized vehicles to escort them along the road. Vehicles in a convoy are instructed to stay a minimum of 1 km behind the pilot vehicle unless otherwise instructed by the pilot vehicle. KivIA and HTO representative regularly participated in leading the essential vehicles.

There were 41 convoys between 2 April and 12 December along the AWAR, and 40 convoys between 8 April and 29 November along the WTHR in 2024 (Table 3-16). Note that convoys were included as one-way trips, meaning a round trip on a single day would be considered two separate convoys. Convoys occurred during road closures, but convoys did not occur on all days where roads were closed. Light vehicles were the most common vehicle type (n=251), followed by medium vehicles (n=172; Table 3-16).

Table 3-14: Monthly Traffic Data for the Meadowbank All-Weather Access Road in 2024

Month	Heavy Equipment	Medium Equipment	Light Equipment	Total
January	0	895	482	1,377
February	0	984	543	1,527
March	66	1,006	514	1,586
April	0	636	509	1,145
May	0	1,142	768	1,910
June	1	1,948	612	2,561
July	0	1,927	737	2,664
August	0	1,961	670	2,631
September	46	1,123	761	1,930
October	1	1,070	434	1,505
November	0	695	415	1,110
December	0	759	428	1,187
Total	**114**	**14,146**	**6,873**	**21,133**

Note: Heavy equipment = haul trucks, long haul trucks; Medium equipment = tankers, graders, snowplows, cement trucks, fuel trucks, tractor-trailers, and other similar sized vehicles; Light equipment = pick-up trucks, bus, water trucks, cube trucks, and other similar sized vehicles.

Table 3-15: Monthly Traffic Data for the Meadowbank Whale Tail Haul Road in 2024

Month	Heavy Equipment	Medium Equipment	Light Equipment	Total
January	5,328	339	119	5,786
February	5,890	488	167	6,545
March	6,098	417	142	6,657
April	1,634	229	215	2,078
May	6,478	457	330	7,265
June	6,768	668	227	7,663
July	6,524	471	144	7,139
August	6,128	674	141	6,943
September	3,922	797	273	4,992
October	4,088	533	89	4,710
November	5,096	411	228	5,735
December	5,764	302	203	6,269
Total	**63,718**	**5,786**	**2,278**	**71,782**

Note: Heavy equipment = haul trucks, long haul trucks; Medium equipment = tankers, graders, snowplows, cement trucks, fuel trucks, tractor-trailers, and other similar sized vehicles; Light equipment = pick-up trucks, bus, water trucks, cube trucks, and other similar sized vehicles.

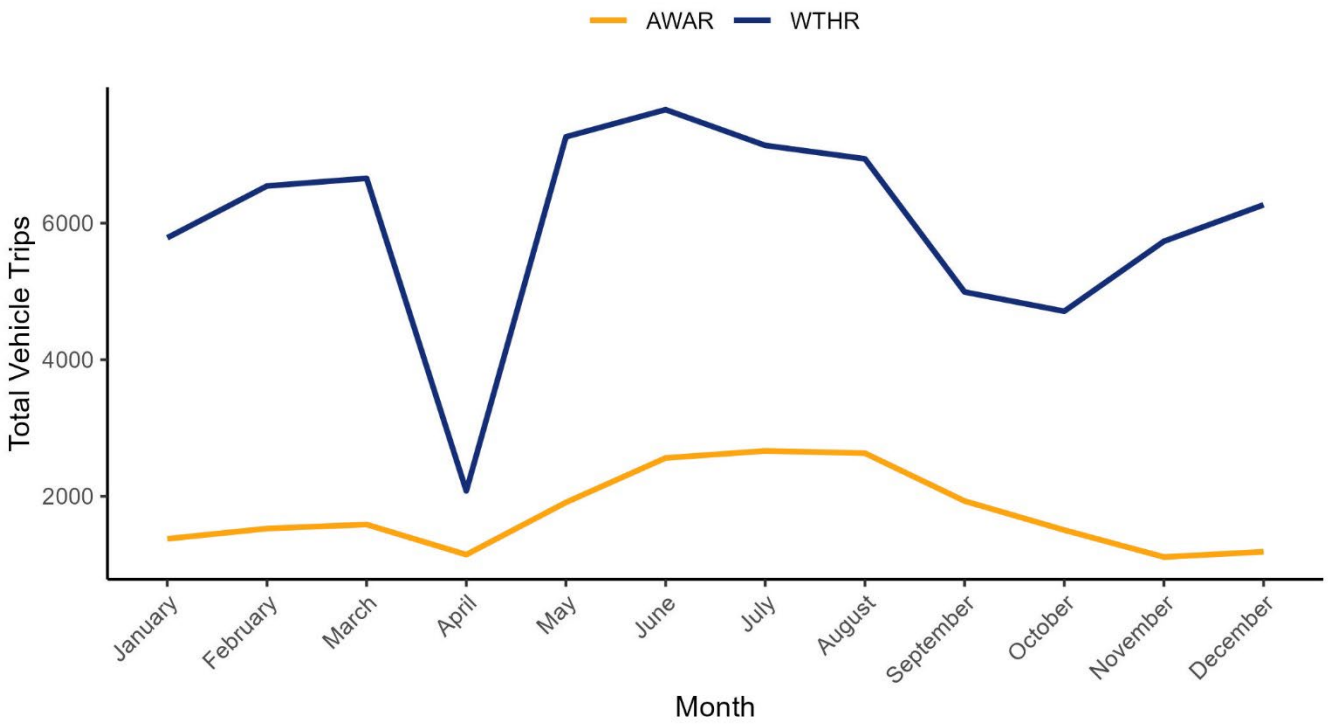


Figure 3-5: Total Vehicle Traffic (One-way Trips) Along All-Weather Access Road and Whale Tail Haul Road per Month in 2024

Table 3-16: Convoy Tracker for the AWAR and WTHR in 2024

Date	Direction of Travel	Convoy Type	Light	Medium	Heavy	Total[(a)]
AWAR						
2024-04-02	North	HTO pickup escorted the Crew changed consisted of 2 passenger vans	3	0	0	3
2024-04-02	South	HTO pickup escorted the Crew changed consisted of 2 passenger vans	3	0	0	3
2024-04-05	North	Escorted by KivIA pickup, with a scouting group led by an HTO pickup and accompanied by a road maintenance equipment	4	1	0	5
2024-04-05	South	Escorted by KivIA pickup, with a scouting group led by an HTO pickup and accompanied by a road maintenance equipment	4	1	0	5
2024-04-09	North	HTO escorted the convoy consisted of a passenger bus, accompanied by a road maintenance equipment	2	1	0	3
2024-04-09	South	HTO escorted the convoy consisted of a passenger bus, accompanied by a road maintenance equipment	2	1	0	3
2024-04-10	North	A convoy escorted by HTO occurred today which consisted of 5 fuel tankers	1	5	0	6
2024-04-10	South	A convoy escorted by HTO occurred today which consisted of 5 fuel tankers	1	5	0	6
2024-04-11	North	Convoy escorted by HTO of 5 fuel tankers 2 passenger vans and a coach bus	4	5	0	9
2024-04-11	South	Convoy escorted by HTO of 5 fuel tankers 2 passenger vans and a coach bus	4	5	0	9
2024-04-12	North	Convoy escorted by HTO of 6 fuel tankers and a gasoline truck	1	7	0	8
2024-04-12	South	Convoy escorted by HTO of 6 fuel tankers and a gasoline truck	1	7	0	8
2024-04-17	North	Escorted by HTO, 2 passenger vans and 6 tankers north bound	3	6	0	9
2024-04-17	South	Escorted by HTO, 2 passenger vans and 2 tankers	3	2	0	5
2024-04-18	South	Convoy escorted by HTO of 7 tankers	1	7	0	8
2024-04-18	North	Convoy escorted by HTO of 4 tankers	1	4	0	5
2024-04-19	South	Convoy escorted by HTO of 2 passenger vans, 4 tankers and a tractor trailer	3	5	0	8
2024-04-19	North	Convoy escorted by HTO 2 passenger vans and 6 tankers	3	6	0	9
2024-05-02	North	Escorted by HTO, convoy consisted of bus and 6 fuel tankers	2	6	0	8
2024-05-02	South	Escorted by HTO, convoy consisted of bus and 3 fuel tankers	2	3	0	5
2024-05-08	North	Led by HTO, a convoy of 4 tankers and 1 pickup was completed.	2	4	0	6
2024-05-09	North	Led by HTO, a convoy of 4 tankers and a passenger bus was completed.	2	4	0	6
2024-05-09	South	Led by HTO, a convoy of 4 tankers and a passenger bus was completed.	2	4	0	6
2024-09-03	North	HTO Convoying Daily Ride (1 x bus)	2	0	0	2

Table 3-16: Convoy Tracker for the AWAR and WTHR in 2024

Date	Direction of Travel	Convoy Type	Light	Medium	Heavy	Total[(a)]
2024-09-03	South	HTO Convoying Daily Ride (1 x bus)	2	0	0	2
2024-09-05	North	HTO Convoying Daily Ride (1 x bus)	2	0	0	2
2024-09-05	South	HTO Convoying Daily Ride (1 x bus)	2	0	0	2
2024-10-17	North	HTO Convoying Daily Ride (1 X Passenger Van)	2	0	0	2
2024-10-17	South	HTO Convoying Daily Ride (1 X Passenger Van)	2	0	0	2
2024-11-06	North	KivIA Convoying Daily Ride (2 x Passenger Van)	3	0	0	3
2024-11-06	South	KivIA Convoying Daily Ride (2 x Passenger Van)	4	0	0	4
2024-11-07	North	HTO Convoying Daily Ride (3 X Passenger Van)	4	0	0	4
2024-11-07	South	HTO Convoying Daily Ride (3 X Passenger Van)	4	0	0	4
2024-11-29	South	HTO Convoying Daily Ride (2 X Passenger Van)	3	0	0	3
2024-11-29	North	HTO Convoying Daily Ride (2 X Passenger Van)	3	0	0	3
2024-12-05	North	HTO Convoying Daily Ride (2 X Passenger Van)	3	0	0	3
2024-12-05	South	HTO Convoying Daily Ride (2 X Passenger Van)	3	0	0	3
2024-12-10	North	HTO Convoying Daily Ride (1 X Passenger Van)	2	0	0	2
2024-12-10	South	HTO Convoying Daily Ride (1 X Passenger Van)	2	0	0	2
2024-12-12	North	HTO Convoying Daily Ride (1 X Passenger Van)	2	0	0	2
2024-12-12	South	HTO Convoying Daily Ride (1 X Passenger Van)	2	0	0	2
WTHR						
2024-04-08	South	Env tech escorted crew bus and kitchen cube northbound and then an ERT pickup southbound.	4	0	0	4
2024-04-08	North	Env tech escorted crew bus and kitchen cube northbound and then an ERT pickup southbound.	4	0	0	4
2024-04-09	South	Escorted crew bus northbound, then two graders and a service truck southbound	3	2	0	5
2024-04-09	North	Escorted crew bus northbound, then two graders and a service truck southbound	3	2	0	5
2024-04-10	South	Env tech escorted 3 crew busses and a cube truck southbound then the same group northbound afterward	5	0	0	5
2024-04-10	North	Env tech escorted 3 crew busses and a cube truck southbound then the same group northbound afterward	5	0	0	5

Table 3-16: Convoy Tracker for the AWAR and WTHR in 2024

Date	Direction of Travel	Convoy Type	Light	Medium	Heavy	Total[(a)]
2024-04-11	South	Env tech escorted 3 crew busses and a cube truck southbound then the same group northbound afterward	5	0	0	5
2024-04-11	North	Env tech escorted 3 crew busses and a cube truck southbound then the same group northbound afterward	5	0	0	5
2024-04-13	South	Escorted by Agnico environment, consisting of 2 coach buses, 1 cube truck, and including a grader with the current windy conditions	4	1	0	5
2024-04-13	North	Escorted by Agnico environment, consisting of 2 coach buses, 1 cube truck, and including a grader with the current windy conditions	4	1	0	5
2024-04-15	South	Convoy escorted by Environment of 2 coach bus, 1 cube truck, 1 grader for road maintenance	4	1	0	5
2024-04-15	North	Convoy escorted by Environment of 2 coach bus, 1 cube truck, 1 grader for road maintenance	4	1	0	5
2024-04-17	South	Under Agnico Eagle environmental staff escort, a convoy of 3 passenger buses, 1 cube truck and road maintenance vehicle took place	5	1	0	6
2024-04-17	North	Under Agnico Eagle environmental staff escort, a convoy of 3 passenger buses, 1 cube truck and road maintenance vehicle took place	5	1	0	6
2024-04-19	South	A convoy consisting of 3 passenger buses, 1 cube truck and road maintenance vehicle proceeded south bound	5	1	0	6
2024-04-19	North	Northbound convoy, the setup remained largely the same, with 3 passenger buses, 1 cube truck, a road maintenance vehicle, and a tractor trailer	5	2	0	7
2024-04-22	South	ENV tech escorted 1 bus, 1 cube truck and a grader (for road maintenance)	3	1	0	4
2024-04-22	North	ENV tech escorted 1 bus, 1 cube truck, 1 grader (for road maintenance) and 7 fuel tanker since there was no group above 200 on the road	3	8	0	11
2024-04-23	South	A passenger and fuel convoy took place, being composed of 2 passenger buses, 1 cube truck, 1 road maintenance vehicle south bound	4	8	0	12
2024-04-23	North	north bound convoy was composed of 2 passenger bus, 1 cube truck, and 1 road maintenance vehicle.	4	1	0	5
2024-04-24	South	A passenger and fuel convoy took place, being composed of 2 passenger buses, 1 cube truck, 1 road maintenance vehicle	4	1	0	5
2024-04-24	North	north bound convoy was composed of 2 passenger bus, 1 cube truck, 7 fuel tankers, 2 tractor trailer and 1 road maintenance vehicle	4	10	0	14
2024-04-25	South	Convoy was composed of 3 passenger buses, 1 cube truck, 7 fuel tankers, 3 tractor trailers and 1 road maintenance vehicle	5	11	0	16

Table 3-16: Convoy Tracker for the AWAR and WTHR in 2024

Date	Direction of Travel	Convoy Type	Light	Medium	Heavy	Total[(a)]
2024-04-25	North	Convoy was composed of 2 passenger bus, 1 cube truck, 7 fuel tankers, and 2 tractor trailers	4	9	0	13
2024-04-26	South	Convoy consisted of 2 passenger buses, 1 cube truck, 7 fuel tankers, 2 tractor trailers and 1 road maintenance vehicle	4	10	0	14
2024-04-26	North	Convoy consisted of 2 passenger bus for crew change, and 1 cube truck	4	0	0	4
2024-04-27	South	The southbound convoy consisted of 2 pick-up trucks and 1 road maintenance vehicle	2	1	0	3
2024-04-27	North	The north bound convoy consisted of 2 pick-up trucks, 7 fuel tankers, 1 tractor trailer and 1 cube truck and 1 grader	3	9	0	12
2024-04-28	South	Convoy consisted of 2 cube trucks, 7 fuel tankers, 2 tractor trailer and 1 road maintenance vehicle	3	10	0	13
2024-04-28	North	Convoy consisted of 7 fuel tankers, 2 tractor trailer and 1 cube truck	2	9	0	11
2024-05-01	South	Under environmental staff escort, a passenger convoy took place	3	0	0	3
2024-05-01	North	Under environmental staff escort, a passenger convoy took place	3	0	0	3
2024-05-02	South	Under environmental staff escort, a passenger convoy took place	3	0	0	3
2024-05-02	North	Under environmental staff escort, a passenger convoy took place	3	0	0	3
2024-07-31	South	A convoy consisting of 2 buses, 1 cube and 1 road maintenance vehicle	4	1	0	5
2024-07-31	North	A convoy consisting of 2 buses, 1 cube and 1 road maintenance vehicle	4	1	0	5
2024-11-28	South	1 Food Truck + Crew change bus	3	0	0	3
2024-11-28	North	1 Food Truck + Crew change bus	3	0	0	3
2024-11-29	South	1 Food Truck + Crew change bus + 1 Grader	3	1	0	4
2024-11-29	North	Crew change bus + 1 Grader	2	1	0	3
		Total[(b)]	**251**	**203**	**0**	**454**

Note: Heavy equipment = haul trucks, float; Medium equipment = emulsion, fuel tanker, tractor trailer, roll off, vacuum, lube truck, and other similar sized vehicles; Light equipment = wildlife monitors, pick-up trucks, bus, cube truck, and other similar sized vehicles.

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

(a) Total number of vehicles per convoy.

(b) Total number of vehicles by vehicle type summed across all AWAR and WTHR convoys.

3.6.8 Caribou Responses to Mitigation

Caribou Crossings

The frequency of road surveys in 2024 demonstrate Agnico Eagle's commitment to minimizing impacts to caribou from the AWAR and WTHR (including Vault Haul Road). Mitigation measures such as reduced speeds, restricted access, convoys and multiple road closures function to minimize road-related effects including mortality and injury and to increase caribou passage. Incidental sightings in 2024 recorded in the Wildlife Log (Appendix A) and road surveys showed that caribou crossed roads throughout the year, with especially high numbers during fall and spring migration (Table 3-17).

A total of 9,243 caribou were observed crossing the AWAR and 2,468 caribou were observed crossing the WTHR in 2024. For the AWAR, most caribou crossing observations occurred during fall migration with 85% (7,858 of 9,243 caribou) of observed AWAR caribou crossings occurring during the fall. The months with the greatest number of caribou observed crossing the AWAR included October (over 1,975 observed crossings), and November (over 5,716 observations; Figure 3-6). There were no observed caribou crossings on the AWAR during July (Figure 3-6). During fall migration, 96% (1,593 of 2,371) of observed caribou crossings on the AWAR occurred on dates with a 24-hour AWAR closure (Table 3-17), which is to be expected given that high numbers of caribou observations trigger road closures. For annual caribou crossing observations on the AWAR, 82% (7,595 of 9,243 caribou) of observed crossing events occurred on dates with an AWAR closure.

For the WTHR, most caribou crossing observations occurred during the spring migration with 96% (2,371 of 2,468) of observed WTHR caribou crossing occurring during this season. The month with the greatest number of caribou crossing the WTHR was April with 1,714 caribou crossings observed. There were no observed caribou crossings on the WHTR in January, February, March, September or December (Figure 3-6). During spring migration, 67% (1,593 of 2,371 caribou) of observed caribou crossings on the WTHR occurred on dates with a 24-hour WTHR closure (Table 3-17). For annual caribou crossing observations on the WTHR, 96% (2,376 of 2,468 caribou) of observed crossing events occurred on dates with a WTHR 24-hour closure or partial closure, and 4% (89 of 2,468 caribou) occurred on a day with a speed or access restriction in place.

Table 3-17: Observations of Caribou Crossing AWAR and WTHR in 2024

Season	Date	Closure Status	Crossing KM	Number of Caribou Crossing
AWAR				
Winter	2024-01-02	Restricted Access	50	5
	2024-01-06	Partial Closure	14	152
	2024-01-10	Speed Restriction	56	14
	2024-01-24	Speed Restriction	54	15
	2024-02-01	Restricted Access	58	5
	2024-02-03	Partial Closure	97	12
	2024-02-05	Partial Closure	33	6
	2024-02-07	Open	57	15
	2024-02-18	Speed Restriction	35	10
	2024-02-23	Speed Restriction	97	8
	2024-02-23	Speed Restriction	37	4
	2024-02-25	Partial Closure	57	6
	2024-02-25	Partial Closure	57	2
	2024-02-25	Partial Closure	33	1
	2024-02-25	Partial Closure	56	19
	2024-02-25	Partial Closure	96	9
	2024-03-02	Speed Restriction	12	16
	2024-03-06	Restricted Access	54	81
	2024-03-06	Restricted Access	22	8
	2024-03-13	Partial Closure	9	15
	2024-03-24	Open	98	4
Spring	2024-04-02	Closed	69	48
	2024-04-07	Closed	37	4
	2024-04-23	Partial Closure	99	16
	2024-04-29	Open	101	1
	2024-04-30	Partial Closure	101	470
	2024-05-01	Partial Closure	102	3
	2024-05-07	Partial Closure	104	9
	2024-05-12	Partial Closure	104	1
	2024-05-12	Partial Closure	100	12
	2024-05-12	Partial Closure	100	16
	2024-05-13	Speed Restriction	104	10
	2024-05-13	Speed Restriction	99	15
	2024-05-21	Partial Closure	100	3
	2024-05-24	Closed	40	4
	2024-05-25	Closed	79	1

Table 3-17: Observations of Caribou Crossing AWAR and WTHR in 2024

Season	Date	Closure Status	Crossing KM	Number of Caribou Crossing
Summer	2024-06-19	Speed Restriction	63	8
	2024-08-08	Speed Restriction	49	1
	2024-08-08	Speed Restriction	43	1
	2024-08-10	Open	87	1
	2024-09-02	Partial Closure	23	3
	2024-09-11	Partial Closure	42	53
	2024-09-11	Partial Closure	49	46
	2024-09-11	Partial Closure	60	73
	2024-09-11	Partial Closure	60	87
	2024-09-11	Partial Closure	77	55
	2024-09-12	Partial Closure	86	10
	2024-09-17	Speed Restriction	59	3
	2024-09-18	Speed Restriction	93	2
Fall	2024-09-23	Restricted Access	84	17
	2024-09-24	Partial Closure	54	55
	2024-10-05	Partial Closure	15	36
	2024-10-16	Partial Closure	76	41
	2024-10-16	Partial Closure	74	148
	2024-10-27	Closed	13	1000
	2024-10-27	Closed	13	750
	2024-11-03	Closed	21	15
	2024-11-03	Closed	18	100
	2024-11-04	Closed	6	5000
	2024-11-05	Closed	37	174
	2024-11-05	Closed	13	7
	2024-11-27	Closed	61	60
	2024-11-29	Closed	78	200
	2024-11-30	Closed	96	160
	2024-12-06	Partial Closure	102	11
	2024-12-07	Open	104	15
	2024-12-09	Closed	75	8
	2024-12-12	Closed	52	61
Winter	2024-12-17	Closed	51	3
	2024-12-21	Partial Closure	52	19
			Total	**9,243**

Table 3-17: Observations of Caribou Crossing AWAR and WTHR in 2024

Season	Date	Closure Status	Crossing KM	Number of Caribou Crossing
WTHR				
Spring	2024-04-15	Closed	113	44
	2024-04-15	Closed	113	110
	2024-04-19	Closed	177	60
	2024-04-19	Closed	169	16
	2024-04-19	Closed	177	110
	2024-04-22	Closed	163	150
	2024-04-22	Closed	112	119
	2024-04-22	Closed	126	170
	2024-04-22	Closed	154	140
	2024-04-23	Closed	151	3
	2024-04-23	Closed	168	9
	2024-04-24	Closed	123	2
	2024-04-24	Closed	150	7
	2024-04-26	Closed	146	9
	2024-04-27	Closed	110	27
	2024-04-30	Partial Closure	113	670
	2024-04-30	Partial Closure	113	68
	2024-05-01	Closed	120	30
	2024-05-01	Closed	113	587
	2024-05-09	Partial Closure	177	40
Summer	2024-05-26	Open	129	1
	2024-06-01	Speed Restriction	113	16
	2024-07-31	Partial Closure	144	1
	2024-07-31	Partial Closure	143	1
	2024-08-02	Restricted Access	179	12
	2024-08-03	Open	172	1
	2024-08-07	Speed Restriction	120	1
	2024-08-07	Speed Restriction	170	2
	2024-08-12	Speed Restriction	169	1
	2024-08-12	Speed Restriction	151	1
	2024-08-12	Speed Restriction	129	1
	2024-08-19	Speed Restriction	135	1
	2024-08-21	Speed Restriction	152	2
	2024-08-27	Open	134	1
	2024-08-31	Speed Restriction	147	1
Fall	2024-10-08	Speed Restriction	139	51
	2024-11-29	Closed	174	3
			Total	**2,468**

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road. Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15, Winter = Dec 16 to Mar 31.

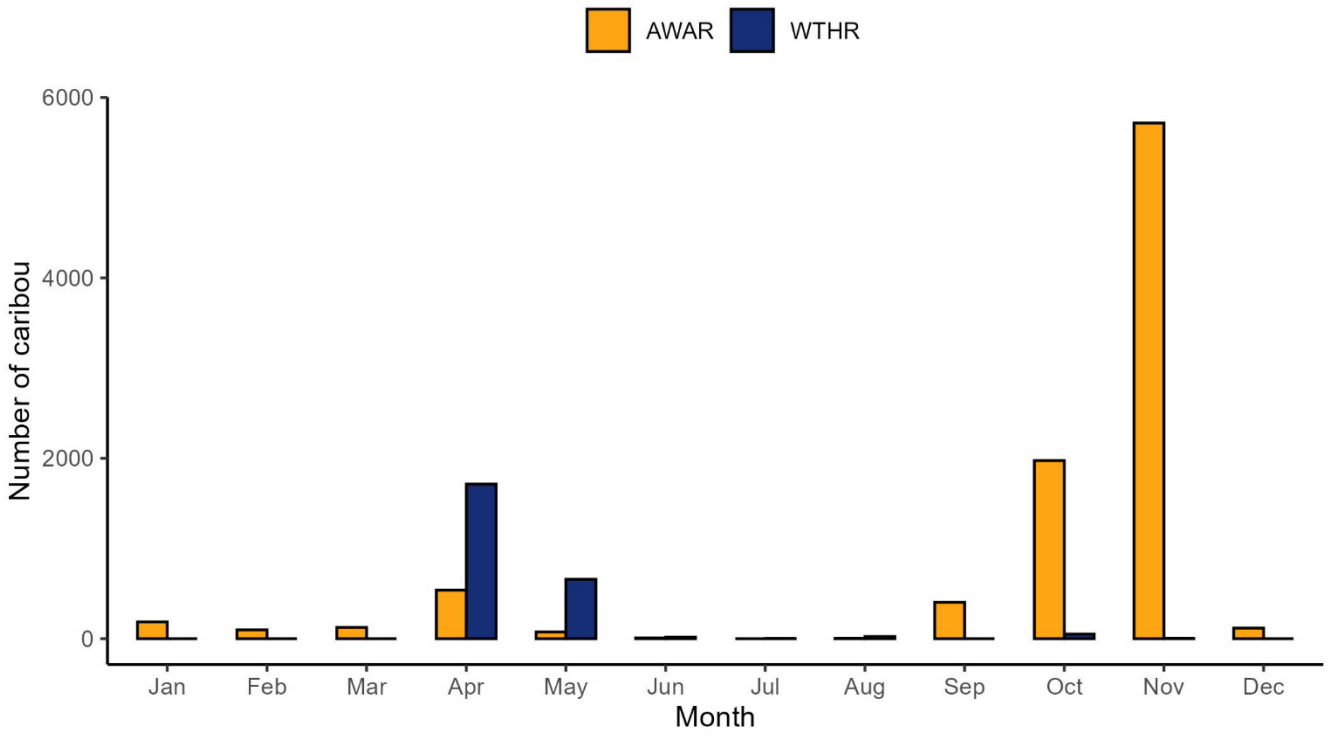


Figure 3-6: Number of Caribou Crossing Observations per Month on the All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) during 2024

Tolerant Caribou Observations

Observations of tolerant caribou along the AWAR and WTHR contribute to assessing risk and the success of mitigation measures. The TEMP version 7 defines Project tolerant caribou as:

> *"An animal or group of animals (i) observed within a mitigation distance buffer for greater than 72 hours during the winter or 48 hours during other season; and (ii) not visibility disturbed by the Project"*

There were no observations of project tolerant caribou along the AWAR or WTHR in 2024.

3.6.9 Road-related Wildlife Mortality

Wildlife mortalities associated with the AWAR and WTHR during 2024 are recorded in Table 3-18, and reports are included in Appendix C. There were no road-related grizzly bear, muskox, or wolf mortalities associated with the AWAR or WTHR in 2024. There was one caribou mortality that took place on the AWAR on 05 January 2024 (Table 3-18). The night prior the road had been closed due to poor weather conditions with the road maintenance crew focused on the southern portion of the road. The caribou was observed by a grader operator about 2 m from the road being eaten by wolves. The Agnico Eagle Environment team was sent to investigate and collect the carcass at 7:30 a.m., there were no reports of wildlife incidents to Agnico Eagle prior to the grader operator. The carcass was delivered to Baker Lake GN conservation officers on 08 January 2024. GN Conservation officers suggested the caribou was struck by a vehicle. In addition, one wolverine mortality that took place on WTHR on 16 November 2024. Road-related mortalities from 2007 to 2024 are presented in Table 3-19. Mine site related mortalities are described in Section 4.5.8. There were more road-related mortalities reported in 2024 than 2021, 2022, and 2023 (Golder 2022; WSP 2023a; WSP 2024).

Upon discovery of any roadkill remains that had not been reported to Environment staff, employees were reminded of road rules and the need to enforce these rules by Environment staff and/or road supervisors. All employees are regularly reminded at toolbox meetings that all Project-related incidents are to be reported, and that wildlife have the right-of-way at all times. Mine staff are required to stop vehicles and wait for wildlife to cross roads. No feeding wildlife and waste management practices are also regularly reviewed with employees.

Table 3-18: Project Related Wildlife Mortalities Related to the All-Weather Access Road and Whale Tail Haul Road in 2024

Date	Species	Count	Location	Comments
AWAR				
2024-01-05	Caribou	1	KM 92	Struck by a vehicle on the road.
2024-05-13	Arctic ground squirrel	1	KM 17	Struck by a vehicle on the road.
2024-05-20	Ptarmigan	1	KM 52	Struck by a vehicle on the road.
2024-05-20	Arctic ground squirrel	1	KM 30	Struck by a vehicle on the road.
2024-05-20	Arctic ground squirrel	1	KM 63	Struck by a vehicle on the road.
2024-05-21	Ptarmigan	1	KM 20	Struck by a vehicle on the road.
2024-06-06	Ptarmigan	1	KM 13	Struck by a vehicle on the road.
2024-06-13	Ptarmigan	1	KM 62	Struck by a vehicle on the road.
2024-06-13	Arctic ground squirrel	1	KM 1	Struck by a vehicle on the road.
2024-07-08	Arctic Fox	1	KM 48	Struck by a vehicle on the road.
2024-08-02	Arctic ground squirrel	1	KM 64	Struck by a vehicle on the road.
2024-08-04	Arctic Fox	1	KM 102	Struck by a vehicle on the road.
2024-08-06	Arctic Hare	1	KM 35	Struck by a vehicle on the road.
2024-08-06	Arctic Hare	1	KM 87	Struck by a vehicle on the road.
2024-08-06	Arctic ground squirrel	1	KM 63	Struck by a vehicle on the road.
2024-08-08	Arctic ground squirrel	1	KM 64	Struck by a vehicle on the road.
2024-08-09	Arctic Fox	1	KM 98	Struck by a vehicle on the road.
2024-08-13	Arctic ground squirrel	1	KM 85	Struck by a vehicle on the road.
2024-08-20	Arctic Hare	1	KM 89	Struck by a vehicle on the road.
2024-08-23	Arctic ground squirrel	1	KM 104	Struck by a vehicle on the road.
2024-09-18	Ptarmigan	1	KM 65	Struck by a vehicle on the road.
2024-10-14	Arctic Fox	1	KM 18	Struck by a vehicle on the road.
2024-12-19	Arctic Hare	1	8	Struck by a vehicle on the road.
WTHR				
2024-08-07	Arctic ground squirrel	1	KM 160	Struck by a vehicle on the road.
2024-08-07	Arctic ground squirrel	1	KM 127	Struck by a vehicle on the road.
2024-08-07	Arctic Fox	1	KM 116	Struck by a vehicle on the road.
2024-11-16	Wolverine	1	KM 135	Struck by a vehicle on the road.
2024-11-21	Arctic Hare	1	KM 127	Struck by a vehicle on the road.
2024-11-26	Arctic Fox	1	KM 163	Struck by a vehicle on the road.
2024-12-24	Arctic Fox	1	KM 168	Struck by a vehicle on the road.

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road, KM = Kilometer Marker.

Table 3-19: Summary of Road-related Wildlife Mortality Records (2007 to 2024)

Year	Caribou	Grizzly Bear	Muskox	Wolverine	Wolf	Fox	Small Mammals	Small Birds	Unidentified Small Animal
AWAR									
2007	3	0	0	0	0	0	3	3	0
2008	10	0	0	0	2	13	7	17	0
2009	1	0	0	0	0	1	6	2	0
2010	1	0	0	0	0	2	6	2	0
2011	2	0	0	0	1	0	5	4	0
2012	2	0	0	1	0	0	3	1	0
2013	5	0	0	0	0	1	1	1	0
2014	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	1	4	2	1
2016	0	0	0	0	0	2	0	1	0
2017	0	0	0	0	0	5	3	3	0
2018	0	0	0	0	0	0	2	0	0
2019	0	0	0	0	0	0	3	0	0
2020	1	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	5	9	1	0
2022	0	0	0	1	0	0	3	1	0
2023	0	0	0	0	0	0	2	0	0
2024	1	0	0	0	0	4	13	5	0
WTHR									
2018	0	0	0	0	0	0	2	0	0
2019	0	0	0	0	0	1	1	1	0
2020	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	2	11	0	0
2022	0	0	0	0	0	0	5	0	0
2023	0	0	1	0	0	1	1	0	0
2024	0	0	0	1	0	3	3	0	0

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

3.7 Accuracy of Impact Predictions

The summary of the impact predictions identified in the TEMP version 7 (Agnico Eagle 2019) are listed in Table 3-20. The 2024 AWAR and WTHR survey data were compared to the impact prediction thresholds to evaluate adherence to the impact predictions and the provision of adaptive management, as either a necessary or proactive measure. None of the thresholds were exceeded in 2024.

Table 3-20: Accuracy of Impact Predictions – Sensory Disturbance and Mortality along the All-Weather Access Road and Whale Tail Haul Road in 2024

Potential Effect	Threshold	Threshold Exceeded (2024)	Adaptive Management Implemented	Monitoring Methods
Sensory Disturbance	No threshold but Decisions Trees followed when caribou are seen near mine facilities	Not Applicable	YES Multiple road closures and notices, good engagement of Wildlife Log by site staff. Use of Decision Tree for Management and Monitoring.	AWAR and WTHR Surveys, Wildlife Log, Mortality Reporting Satellite-collaring data
Project-related Mortality (ungulates)	Threshold level of mortality is two individuals per year.	NO One caribou mortality on AWAR	YES Incident of caribou road mortality reviewed with all LHT crews. Road users reminded to be alert and cautious of wildlife along the roadways, especially during night shift and low visibility conditions.	AWAR and WTHR surveys Satellite-collaring data surveys Incidental wildlife reporting
Project-related Mortality (predatory mammals)	Predatory mammals (i.e., grizzly bear, wolverine, wolf) will not be killed or injured by vehicle collisions. Threshold level of mortality is two individuals per year.	NO One wolverine mortality on WTHR	YES Incident of wolverine road mortality reviewed with all LHT crews. Road users reminded to be alert and cautious of wildlife along the roadways, especially during night shift and low visibility conditions.	AWAR and WTHR surveys Incidental wildlife reporting
Project-related Mortality	Raptors or waterbirds will not be killed along Project roads. Threshold is one individual due to vehicle collision per year.	NO	NO	AWAR and WTHR surveys Incidental wildlife reporting

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

3.8 Management Recommendations

The AWAR and WTHR survey data are important for documenting sensitive periods when the area near the road is utilized by various wildlife species and for evaluating the need, if any, to adaptively manage mitigation (e.g., temporary road closures and radio announcements). Mitigation actions linked to individual wildlife observations (Appendix A) should continue to be recorded, and caribou movement patterns continue to require close monitoring in 2025. No other management mitigations are recommended at this time.

4.0 PITS AND MINE SITE GROUND SURVEYS

4.1 Overview

The Mine site ground survey monitoring program (i.e., for Meadowbank/Vault, and Whale Tail) has been designed to verify that impacts to wildlife in and around the Project LSA are minimized. The program has a strong emphasis on monitoring mortality and disturbance of various wildlife groups utilizing habitats near the Project. In addition, the Mine site ground survey monitoring program is an integral component of the monitoring strategy for evaluating sensory disturbance indicators for caribou.

4.2 Objectives

The primary objectives of the Mine site ground surveys are to:

1) Use Decisions Trees when caribou are seen near Project facilities to determine the level of adaptive management (e.g., suspend activities) required.

2) Confirm that caribou will not be killed through other Project-related mortality such as falling in pits, tailings sludge, or other means. The cumulative Project threshold level of mortality is two individuals per year.

3) Verify that measures are in place such that grizzly bears, wolverines, or wolves will not need to be destroyed at the Project site in association with human-wildlife conflicts. The threshold level of mortality for predatory mammals is two individuals per year.

4) Verify that disturbance to high value habitats (e.g., sedge meadows) and nesting migratory birds is avoided, and all activities within 100 m of a migratory bird nest site be monitored, if deemed necessary.

4.3 Duration

The Mine site ground surveys are to be conducted regularly by Agnico Eagle Environment personnel over the operation and closure phases of the Project. Surveys are conducted at least once per week, with increased frequency if caribou are present.

4.4 Methods

In 2024, Environment personnel conducted regular Mine site inspections focusing on waste management, spills, hazardous waste management, and wildlife monitoring. Formal Mine site inspections were carried out at least weekly as part of broader environmental on-site management. During these inspections, if non-conformities were identified they are rapidly addressed by the responsible department.

Weekly inspections included:

- Regular monitoring of all wildlife species near the facilities. Large mammal presence within the Project is documented during daily and weekly (formal) inspections. Any issues related to safety or proximity effects are identified and the appropriate mitigation is implemented. If risks to animal health are perceived, efforts are made to avoid the wildlife and provide them the right-of-way. In 2024, Mine-site ground survey inspections were conducted on average once or twice per week (Meadowbank survey frequency was on average 1 survey every 4.24 days and Whale Tail survey frequency was on average 1 survey every 4.20 days).
- Regular monitoring of all large mammals in the Project LSA.
- Regular monitoring of breeding birds (especially in the spring), raptors, and nests located in the Project LSA.
- Inspections of waste management areas, bins, and hazardous material storage.

Environment Department inspections and wildlife ground surveys focus on migratory birds, ungulates, Arctic fox, wolf, grizzly bear, and wolverine. Through these observations and those of other Agnico Eagle employees (i.e., incidental observations), and incidence reports provided to the Environment Department. Technicians follow up as needed to ensure the protection of wildlife near the Project. Monthly summary reports and wildlife observation data are submitted to the GN and KivIA, and quarterly reports are submitted to the KivIA.

4.4.1 Incidental Mine Site Wildlife Observations

All Mine site personnel, including construction and support staff, are required to document and report wildlife observed within the LSA of the Project as well as ancillary areas (e.g., AWAR and WTHR). The protocol involves notifying staff in the Environment Department, which is intended to ensure that potential problem animals are identified. Pertinent data, and daily and weekly Mine site inspection reports are consolidated and entered into an electronic database (EQuIS). Monthly summary reports and wildlife observation data are submitted to the GN and KivIA. Quarterly reports are submitted to the KivIA.

4.5 2024 Results

4.5.1 Pit and Mine Site Ground Surveys

The number of surveys completed at Meadowbank Mine and Whale Tail mine sites each in 2024 is provided in Table 4-1. Mine and Pit surveys were distinguished from incidentals starting in October 2021 and were recorded separately from incidentals for all of 2022, 2023, and 2024. Weekly mine inspections at Meadowbank and Whale Tail include a wildlife observation component and are also included in this count.

In 2024, Meadowbank had a total of 86 formal Mine and Pit surveys conducted between 14 January and 30 December. The average frequency of surveys was approximately one survey every 4.24 days during this period, with the largest number of surveys occurring in November and December. Whale Tail had a total of 87 formal Mine and Pit surveys conducted between 6 January and 28 December. The average frequency of surveys was approximately one survey every 4.20 days during this period, with the largest number of surveys occurring in November and December.

Table 4-1: Number of Formal Pit and Mine Site Ground Surveys by Month, 2024

Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Meadowbank	4	4	5	4	4	5	4	3	8	14	16	15	**86**
Whale Tail	4	4	5	5	3	5	4	11	5	11	14	16	**87**

4.5.2 Wildlife Observations from Pit and Mine Surveys

Wildlife observations from formal Pit and Mine surveys conducted between January and December of 2024 are shown in Table 4-2 and wildlife observations from incidental surveys at the Meadowbank and Whale Tail sites are provided in Appendix A. Observations were used by Environment personnel to monitor wildlife activity within the Project and to identify potential problematic or sensitive animals requiring deterrence.

Seven mammal species were reported during formal Pit and Mine surveys at Meadowbank in 2024, including Arctic fox, Arctic ground squirrel, Arctic hare, caribou, wolf, muskox, and wolverine (Table 4-2). Caribou sightings were in April and one observation occurred in August. and muskox sightings were highest in December and were observed in June, July, and September. Wolverines were only reported in December. Four species of birds were reported during formal Pit and Mine surveys at Meadowbank, including Canada goose, common raven, crow, and gull spp. Common raven was the most frequently observed bird species and was reported mostly between January to March.

Five mammal species were reported during formal Pit and Mine surveys Whale Tail Mine in 2024, including Arctic fox, Arctic hare, caribou, grizzly bear, and muskox (Table 4-2). The highest caribou sightings took place in August, followed by November. Muskox sightings were observed most frequently in October for both sites combined. Eight species of birds were observed during formal surveys at Whale Tail in 2024 (Table 4-2). The most frequently observed species were snow goose in September and Canada goose in August.

Table 4-2: Wildlife Observations from Formal Pit and Mine Site Ground Surveys by Month 2024

Species Group	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Meadowbank														
Mammal	Arctic fox	0	0	6	2	1	12	1	0	0	0	1	5	**28**
	Arctic ground squirrel	0	0	0	0	0	0	1	1	0	0	0	0	**2**
	Arctic hare	0	0	2	2	0	0	0	0	0	0	5	0	**9**
	Caribou	0	0	0	13	0	0	0	1	0	0	0	0	**14**
	Muskox	0	0	0	0	0	2	2	0	2	0	0	5	**11**
	Wolf	0	0	0	0	0	0	0	0	0	0	1	2	**3**
	Wolverine	0	0	0	0	0	0	0	0	0	0	0	3	**3**
Bird	American Crow	0	0	0	0	0	0	0	0	0	7	0	15	**22**
	Canada goose	0	0	0	0	0	13	0	4	0	0	0	0	**17**
	Common raven	12	55	16	0	0	0	0	0	0	0	0	5	**88**
	Gull sp.	0	0	0	0	0	1	0	0	0	0	0	0	**1**
Whale Tail														
Mammal	Arctic fox	3	0	1	1	0	0	3	0	1	0	4	14	**27**
	Arctic hare	0	0	0	0	0	0	0	0	0	1	0	0	**1**
	Caribou	0	0	0	7	0	8	4	114	0	0	27	0	**160**
	Grizzly bear	0	0	0	1	0	0	0	0	0	0	0	0	**1**
	Muskox	0	0	0	0	0	3	2	0	0	20	0	0	**25**
Bird	Canada goose	0	0	0	0	0	0	0	28	0	0	0	0	**28**
	Common raven	0	0	0	4	0	0	0	0	0	0	0	2	**6**
	Gull sp.	0	0	0	0	0	0	1	0	0	0	0	0	**1**
	Gyrfalcon	0	0	0	0	0	0	0	1	0	0	0	0	**1**
	Passerine bird	0	0	0	0	0	0	1	0	0	0	0	0	**1**
	Peregrine falcon	0	0	0	0	0	0	0	1	0	0	0	0	**1**
	Sandhill crane	0	0	0	0	0	0	0	2	0	0	0	0	**2**
	Snow goose	0	0	0	0	0	0	0	0	52	0	0	0	**52**

Five mammal species were reported as incidental sightings at Meadowbank in 2024 including Arctic fox, caribou, muskox, wolf, and wolverine (Table 4-3). Incidental caribou sightings were highest between April to June, and one muskox sighting was in June. Wolf were only observed in November and December, and wolverine sightings only occurred during winter months between January to April, and November to December. Arctic fox was sighted in June and once in December. Bird species were recorded incidentally at Meadowbank in July and September (Table 4-3). There were no incidental species recorded at Meadowbank during March or October in 2024.

Six mammal species were reported as incidental sightings at Whale Tail in 2024 including Arctic fox, caribou, grizzly bear, muskox, wolf, and wolverine (Table 4-3). The highest number of caribou sightings took place in August, and sightings occurred between July and September, and December. One grizzly bear was observed in June, and one wolf was observed in January. Twenty-eight muskoxen were observed in July. All incidental bird sightings occurred in July and August at Whale Tail in 2024, with most sightings in July (Table 4-3). There were no incidental species recorded at Whale Tail during February, March, April, or October during 2024.

Table 4-3: Incidental Wildlife Observations in 2024 by Month

Species Group	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Meadowbank														
Mammal	Arctic fox	0	0	0	0	0	10	0	0	0	0	0	1	**11**
	Caribou	0	0	0	22	8	17	0	1	0	0	0	12	**60**
	Muskox	0	0	0	0	0	1	0	0	0	0	0	0	**1**
	Wolf	0	0	0	0	0	0	0	0	0	0	2	6	**8**
	Wolverine	1	1	0	2	0	0	0	0	0	0	2	1	**7**
Bird	American robin	0	0	0	0	0	0	1	0	0	0	0	0	**1**
	Long-tailed duck	0	0	0	0	0	0	0	0	6	0	0	0	**6**
	Duck spp.	0	0	0	0	0	0	0	0	1	0	0	0	**1**
Whale Tail														
Mammal	Arctic fox	0	0	0	0	1	0	0	0	0	0	3	1	**5**
	Caribou	0	0	0	0	0	0	27	98	9	0	0	0	**134**
	Grizzly bear	0	0	0	0	0	1	0	0	0	0	0	0	**1**
	Muskox	0	0	0	0	0	0	28	0	0	0	0	0	**28**
	Wolf	1	0	0	0	0	0	0	0	0	0	0	0	**1**
	Wolverine	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Bird	Golden eagle	0	0	0	0	0	0	1	0	0	0	0	0	**1**
	Gull sp.	0	0	0	0	0	0	5	0	0	0	0	0	**5**
	Gyrfalcon	0	0	0	0	0	0	0	2	0	0	0	0	**2**
	Passerine bird	0	0	0	0	0	0	2	0	0	0	0	0	**2**

4.5.3 Bird Nests

An exemption permit was obtained on April 12, 2024, from the GN for removal of common raven nests that posed risk to proper maintenance of the fuel tank and could possibly result in fire hazard. The exemption permit is provided in Appendix D.

Results of raptor nest monitoring and waterbird nest monitoring are provided in Sections 13.0 and 14.0, respectively.

4.5.4 Wildlife Deterrent Records

Wildlife deterrents are implemented when habituated or problematic wildlife pose a threat to the wildlife or Mine personnel through human-wildlife conflicts. Necessary deterrent strategies are determined and implemented by the Environment Department based on the severity of risk and the nature of the interaction. Each deterrence event is reported using the EQuIS database.

Wildlife deterrents were used and reported at the Project throughout 2024. A total of 25 deterrence activities were reported from interactions with four species of mammals: caribou, grizzly bear, wolf, and wolverine (Table 4-5, Table 4-6). The total number of deterrence actions in 2024 were lower than prior years apart from 2017 (Table 4-4).

Table 4-4: Total Number of Deterrent Records by Year for the Project

Location	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Meadowbank	-	-	-	-	-	33	17	32	59	16	-
Whale Tail	-	-	-	-	-	10	19	10	3	9	-
Total	27	45	21	32	31	43	37[(a)]	42	62	25	**361**

Note: Hyphen symbol indicates unavailable data due to changes in data recording over time. Site totals only available for some years.

(a) One deterrence event included in the total for 2021 occurred on the AWAR.

Deterrence actions in the winter months for 2024 were primarily related to wolverine and wolves, whereas in the spring and summer deterrence actions were related mostly to caribou. Caribou wildlife deterrents involved herding caribou away from potential vehicle or equipment collisions around the mine sites.

Sixteen deterrence actions were taken at Meadowbank, and nine actions were taken at Whale Tail. Whale Tail deterrence actions were for caribou and grizzly bear. Meadowbank deterrence actions involved caribou, wolf, and wolverine. Of the 25 deterrence actions taken in 2024, 22 were classified as successful deterrence and three were classified as unsuccessful deterrence. In December 2024, a wildlife destruction permit was issued for two wolves at Meadowbank, however, deterrence actions following the receipt of the permit did not occur in 2024.

Table 4-5: Details of Deterrence Activities for 2024

Date	Species	Number	Behaviour	Deterrence Reason/Context	Deterrence Method	Deterrence Action	Deterrence Reaction	Deterrence Outcome
Meadowbank Mine								
2024-06-11	Caribou	6	Foraging	Caribou near airstrip with plane on final approach. Wanted to protect caribou	Banger	Used banger to keep away from airstrip	Moved away	Successful deterrence
2024-06-14	Caribou	5	Foraging	Caribou near airstrip with plane on final approach. Wanted to protect caribou	Pick up truck horn	As plane was coming used horn to ensure they were walking away from airstrip	Walked away from airstrip	Successful deterrence
2024-11-22	Wolf	1	Walking	Approaching an unsafe distance from workers	Banger	Used banger	Walked away	Successful deterrence
2024-11-22	Wolf	1	Walking	Approaching workers and equipment	Banger	Used banger	Walked away from site	Successful deterrence
2024-11-30	Wolverine	1	Walking	Approaching workers and equipment	Banger	Mentioned to workers if they hear bang its good	Wolverine walked away from site west on Third Portage Lake	Successful deterrence
2024-12-10	Wolf	1	Foraging	Increase deterring and dispatch	Banger	Wolf traveled northeast	Walked away from landfill	Successful deterrence
2024-12-15	Wolf	1	Resting	Increase deterring and dispatch	6mm pistol with bangers	Notified roll-off operators of this wolf at the landfill on MBK surface channel.	Wolf got up and slowly started to walk away, only mildly bothered.	Unsuccessful deterrence
2024-12-15	Wolf	1	Walking	Nearby workers working outdoors at central dike	Pickup truck and horn	Stopped to notify the three employees in person, notified dewatering & LHT teams and Geotech personnel over the radio	Wolf climbed over east berm and upon to the Pit a WR stockpile, last seen going down Pit A ramp toward east dike.	Successful deterrence
2024-12-15	Wolf	1	Walking/foraging	Nearby workers offloading sewage at south cell.	6mm pistol with bangers	Two people returned during his next offload.	Wolf took off toward the landfill and later viewed at the compost heap in the landfill. Successfully deterred out toward the north cell.	Successful deterrence
2024-12-16	Wolf	1	Trotting/running	Wolf traveled back and forth between sewage offload point (south cell) and landfill offloading area.	Pickup truck & horn	Deterred the wolf out onto south cell and away from employees	The wolf left the area.	Successful deterrence
2024-12-16	Wolf	2	Resting	The wolves were resting near employees working outdoors	Pickup + horn, and a Megaphone	Approached the wolves with pickup & horn, only one wolf moved, the other stayed sleeping. I then used the megaphone siren to deter both wolves successfully	They both left, out toward the south cell	Successful deterrence
2024-12-17	Wolf	1	Walking	Move away from highly traveled area by workers	Horn and banger when the horn didn't work	Tried to get it away from camp as there are pedestrians in certain areas.	Traveled towards the freshwater barge.	Unsuccessful deterrence
2024-12-20	Wolverine	1	Running	Proximity to site	6mm banger pistol	Drove toward wildlife to help deter it away from camp	Ran on top of waste dump	Successful deterrence
2024-12-22	Wolverine	1	Standing	Wolverine near roll-off bin drop area	6mm pistol with bangers	Notified E&I supervisor, so that he can prevent roll off drops at landfill until the animal is deterred	Animal burrowed into the landfill contents	Unsuccessful deterrence
2024-12-27	Wolverine	1	Feeding	Proximity to site	Banger	Used banger and whistler	Went to north cell	Successful deterrence
2024-12-30	Wolverine	1	Lying Down	Proximity to site	Banger	Used banger	Ran away	Successful deterrence
Whale Tail Mine								
2024-04-28	Grizzly bear	1	Walking	Proximity to site	Pistol banger	Advise departments and block roads	Ran north then continued to walk	Successful deterrence
2024-07-05	Caribou	2	Trotting/running	Protect caribou from collision with equipment/vehicles.	Pick up truck	Caribou were guided off the road towards the Nemo Lake.	Caribou moved off the road slowly.	Successful deterrence
2024-07-23	Caribou	1	Milling	Protect caribou from collision with equipment/vehicles.	Audio pyrotechnics deterrent	Used bangers and whistlers to deter caribou from UG ramp and from long haul loading area	Minor reaction	Successful deterrence
2024-07-29	Caribou	1	Running	Protect caribou from collision with equipment/vehicles.	Pick up truck	Radio communication with operation crew, ramps blocked with vehicle	Walking and running	Successful deterrence

Table 4-5: Details of Deterrence Activities for 2024

Date	Species	Number	Behaviour	Deterrence Reason/Context	Deterrence Method	Deterrence Action	Deterrence Reaction	Deterrence Outcome
2024-08-12	Caribou	3	Lying Down	Protect caribou from collision with equipment/vehicles.	Pick up truck	Traffic stopped. Environmental employee gently guided the caribou off the road. Speed restriction in place	The animal slowly raised and left the road	Successful deterrence
2024-08-27	Caribou	1	Standing	Protect caribou from collision with equipment/vehicles.	Pick up truck	They were guided out of the road	Caribou trotted to IVR Dike south and rested at the area	Successful deterrence
2024-08-27	Caribou	2	Standing	Protect caribou from collision with equipment/vehicles.	Pick up truck	The two caribou were directed toward a less disturbed location, away from heavy equipment	They walked towards the tundra area of WT Dike	Successful deterrence
2024-08-27	Caribou	1	Walking	Protect caribou from collision with equipment/vehicles.	Pick up truck	Used pickup truck to direct the caribou to a less disturbed location, out of traffic	Caribou walked to the WRSF dike area	Successful deterrence
2024-08-28	Caribou	5	Trotting/running	Protect caribou from collision with equipment/vehicles.	Pick up truck	Used truck to direct caribou towards tundra away from heavy traffic and equipment	Went into tundra and started feeding	Successful deterrence

Table 4-6: Summary of Deterrence Events in 2024

Location	Species	Number of Deterrence Events		
		Successful	Unsuccessful	Total
Meadowbank	Caribou	2	0	**2**
	Wolf	7	2	**9**
	Wolverine	4	1	**5**
Whale Tail	Caribou	8	0	**8**
	Grizzly bear	1	0	**1**
Total		**22**	**3**	**25**

4.5.5 Waterbird Monitoring

Waterbird monitoring is completed to minimize accidental waterbird confinement around the Meadowbank and Whale Tail sites, entrapment in the tailings, and mortality. No waterbird nest monitoring was completed in 2024, though regular inspections were completed throughout the migratory period and during weekly or daily inspections, as deemed necessary by Environment personnel.

Previous research to investigate mitigation options to minimize flooding-related impacts to birds in the Whale Tail South area was completed in collaboration with Trent University, and a manuscript was published in October 2024 (Holmes et al. 2024).

Further discussion of 2024 waterbird monitoring is provided is Section 14.0.

4.5.6 Raptor Monitoring

Raptor monitoring was conducted as part of routine Mine site inspections of the pit and other areas to ensure adequate bird protection and management. Adult peregrine falcons were observed on 44 occasions at 10 quarry monitoring locations, and eggs or chicks were observed at six quarry monitoring locations. At Quarry 7, the nest was used by Gyrfalcon (*Falco rusticolus*) and four eggs were produced. In addition to observations as part of the raptor nest monitoring (Section 13), there were seven bald eagle (June, July, August), six gyrfalcon (May, August), 46 peregrine falcon detections (May, June, July, August, September), and five rough-legged hawk (March, April, May) along the AWAR and WTHR (Table 3-9, Table 3-10). Additionally, four unidentified falcons were observed along the AWAR and WTHR (Table 3-10).

4.5.7 Predatory Mammal Deterrence and Protection

Improved practices for waste segregation and incineration, the use of enclosed food waste facilities, and skirting around buildings have improved Arctic fox protection and decreased fox-human interactions (Table 4-7).

Deterrence actions for wolverine, which followed the Wildlife Protection and Response Plan (Appendix C in 2019 TEMP), were required on five occasions at the Meadowbank site (Table 4-6). One grizzle bear was successfully deterred from Whale Tail site. For the wolverine deterrence actions at Meadowbank Mine, four were successful and one was unsuccessful. None of the unsuccessful deterrence events resulted in destruction permits to be issued by the wildlife officer. The number of wolverine deterrence efforts were lower in 2024 compared to ear prior to 2016 (Table 4-6).

Table 4-7: Summary of Deterred Predatory Mammals at the Meadowbank Mine and Whale Tail Sites from 2015 to 2024

Species	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Arctic fox	6	6	2	0	4	1	0	5	0	0
Grizzly bear	0	0	0	0	0	0	0	0	0	1
Red fox	1	0	0	0	0	0	0	1	0	0
Wolf	1	4	9	14	9	5	2	7	22	9
Wolverine	5	3	10	17	16	17	6	18	25	5
Total	**23**	**37**	**21**	**31**	**31**	**43**	**8**	**30**	**47**	**15**

Wolves were also regularly observed around the Meadowbank site primarily in the winter months (Table 4-5). Deterrence actions were required on nine occasions at Meadowbank (Table 4-5). For the wolf deterrence actions at Meadowbank Mine, seven were successful and two were unsuccessful. None of the unsuccessful deterrence events resulted in destruction permits to be issued by the GN wildlife officer (Table 4-6). The number of wolf deterrence efforts were lower in 2024 compared to 2023 (Table 4-6).

Notices are sent to Meadowbank employees regarding the presence of wildlife, waste management procedures, and requesting all sea cans and doorways be closed when a non-conformity occurs.

4.5.8 Wildlife Mortality – Meadowbank and Whale Tail Sites

One wildlife Project-related mortality event was observed at Meadowbank in 2024 resulting in six long-tailed duck mortalities (Table 4-8). One Project-related mortality of an Arctic fox occurred at Whale Tail during 2024 following unsuccessful deterrence (Section 4.5.4). There were no Project-related mortalities of caribou, grizzly bear, wolverine, or wolves at either Mine site during 2024 (Table 4-9). Road-related mortalities are tabulated and discussed in Section 3.6.9. Mortality reports are included in Appendix C.

Table 4-8: Wildlife Mortalities at Meadowbank and Whale Tail Sites in 2024

Date	Species	Count	Project Related	Location	Comments
2024-09-06	Long-tailed duck	6	Yes	Meadowbank Mill Area	A small group of ducks flew into the side of the Mill building in between Mill Door B and Mill Door C. One of the seven birds survived. These were originally believed to be black scoters but have since been identified as long-tailed ducks.
2024-12-15	Arctic Fox	1	Yes	Whale Tail	Struck by a vehicle on the road.

Table 4-9: Summary of Project-Related Wildlife Mortality Records for Caribou and Predatory Mammals (2007 to 2024)

Year	Caribou	Grizzly Bear	Wolverine	Wolf
2007	0	0	0	0
2008	0	0	0	2
2009	0	0	0	4
2010	0	0	0	1
2011	0	0	1	4
2012	0	0	0	1
2013	0	0	1	0
2014	0	0	0	1
2015	0	0	0	0[(a)]
2016	0	0	0	0
2017	0	0	1	2
2018	0	0	1	2[(b)]
2019	0	0	1	0
2020	0	0	2	0
2021	0	0	1	0
2022	0	0	1	0
2023	0	0	3	3
2024	0	0	0	0

(a) There was one naturally injured wolf that needed to be euthanized.

(b) Wolf died at Mine site of head injuries; did not need to be dispatched.

4.5.8.1 Caribou

No caribou mortality related to Project activities occurred in 2024.

4.5.8.2 Predatory Mammals

All incident reports, observations, deterrence activities, and Environment team responses to predatory mammal sightings are included in Appendix D. There was one Arctic fox mortality in 2024 at the Whale Tail Mine.

4.5.8.3 Other Wildlife

Six mortalities of long-tailed duck occurred in 2024. On 06 September 2024 a group of seven long-tailed ducks flew into the side of the Mill building in between Mill Door B and Mill Door C. One of the seven birds survived. The ducks were originally believed to be black scoters but have since been identified as long-tailed ducks based on mortality report photos. As per the migratory bird regulated, ECCC was emailed at the time of the mortality of six long-tailed ducks.

4.5.9 Helicopter Activity

- Helicopters are utilized at the Project for various reasons including mobilization of equipment, transport, exploration, surveying, monitoring, and reconnaissance. Pilots are required to review an air traffic procedure that includes the following project specific flight restrictions:
- Long-range flights are a minimum of 650 m above ground level, except for take-off and landings.
- Short-range flights are a minimum of 300 m above ground level, except for take-off and landings.

- Notification of caribou, muskox or other wildlife sightings within 1 km of the helicopter pad.
- Caribou groups of 50 or more animals, and muskoxen of 10 or more animals must be avoided by a minimum of 1,000 m vertically and 1,500 m horizontally. Flocks of migratory birds must be avoided by 1,100 m vertically and 1,500 m horizontally. Flying over known raptor nests will be avoided.
- Harassing wildlife (flying below 300 m) is expressly forbidden unless animals pose an immediate danger to humans.
- However, certain activities are required to be completed at lower altitudes than specified in the air traffic management plan. External load operations (equipment/material slinging), site inspections, reconnaissance and environmental surveys often require lower flight. Flights with these purposes have been considered permissible for low flight. Similarly, flights lower than 300 m have been considered permissible when flying low due to low visibility (poor weather conditions) or for emergency medevac services.

Helicopter methods used in the 2023 report (WSP 2024) to define short and long-term flights as well as take-off and landing were presented and discussed with the TAG in fall 2024 (Agnico Eagle 2024d). TAG members were in support of continuing with the methods applied in 2023. In alignment with the principles of adaptive management, quantitative approaches may be adjusted as needed to improve identification of take-off and landing and to improve flight data summaries.

4.5.9.1 Methods

Track logs and altitudes are recorded using the Honeywell Skyconnect Tracker II, which runs on the Iridium satellite network. This product provides two-way satellite voice communication, ground to asset texting, and asset to ground location tracking service. Spatial location, altitude, and speed of helicopters are collected throughout flights.

While the spatial location, altitude, speed, and detailed flight time of helicopters are tracked and available as detailed GPS points (e.g., a new GPS point provided every minute), flight reports including the purpose for the trip (e.g., passenger, ferry, equipment/material slinging operations, etc.) and the site that the trip was associated with (e.g., Meadowbank Complex), among other details, are recorded by pilots manually using approximate flight times. The connection between the two sets of flight data is complex and not automated. As the aircraft's GPS track flight from all flights starting from their origin city in southern Manitoba and are used intermittently throughout the year for flights at other sites, it is not clear which GPS flights are attributed as Meadowbank flights from GPS points alone. To facilitate this, the following methods were developed to connect manual flight report and GPS data together to allow for more detailed analysis of the flight restrictions outlined above.

Flight track GPS logs for each aircraft operating in the area were combined in ArcGIS Pro (ArcGIS, Redlands, CA). As project flight restrictions specify height above the ground in meters (versus altitude in meters above sea level), the elevation of the ground was determined for each GPS point using the Arctic Digital Elevation Model (ArcticDEM) and the flying height above the ground was calculated. All GPS points were then converted to flight paths specific to each aircraft connecting sequential GPS points during each flight day. Hundreds of flight paths may make up a flight leg (e.g., one flight consisting of GPS points taken each minute flown). For each flight path, details relating to it’s change in time, speed, altitude and height above the ground were calculated. To facilitate in the connection of GPS data to manual flight reports, start and end times of each path were rounded to the nearest 10 minutes.

Flight reports were provided for each aircraft and flight day, in pdf format, as well as in a spreadsheet containing information from all pdf reports. Pilots were instructed to record comments related to reasons for flying lower than the normally required altitude, such as a low ceiling (i.e., < 2000 ft) or due to poor visibility due to weather or wildfire smoke. Each report provides details on the flights operated during that day for each aircraft and are separated by flight leg, depending on the purpose of flight. Flight reports include an approximated time, which was rounded to the nearest 10 minutes to facilitate in the connection with detailed GPS flight paths.

An iterative process was run on the thousands of flight paths, assigning a flight report number and flight leg number to each path based on the aircraft name, date of flight and rounded time of flight. Connections between the GPS flight legs, and flight reports were successful for 94% of flights provided (1,386 of 1,481 flights, 994.2 hours of 1,022.2 flight hours). The remaining mis-joined flights made up 6% of all flights and corresponded to approximately 28 flight hours. This mis-joined data may not have been captured due to inaccuracies in recorded data such as: errors in recorded details of the flight by the pilot, a mismatch of time zones of the flight report and detailed GPS data or similar inaccuracies. Data from the two flight datasets were joined together using an identifier field that was created using the aircraft, date, flight report number and flight leg number. The following discussion reports metrics based only on the flights legs that were successfully connected to flight reports.

Flights were classified as short- or long-range by calculating the maximum distance spanned during an individual flight leg. This was done by identifying GPS points for individual flights that were the furthest away from each other. If this distance was <25 km, the flight was classified as short-range. Flights with longer flight spans were classified as long range. While total flight length was considered to classify flight range, many flight legs consist of multiple trips between two locations (e.g., slinging material back and forth or a return flight to drop off passengers) and many flights that intuitively appear to be short-range would be misclassified. For an accurate assessment of flying height above ground, take-off and landing should not be considered. Flight paths were classified as take-off/landing using the following definitions, which evaluates the change in flying height and flying speed on a 3-timestep moving window (i.e., t, t_{-1} and t_{-2}). Due to the nature of helicopter flight, which can vary in speed and flying heights even at cruising altitude, the definitions include a cruising altitude limit. This means that take-off/landing definitions differ for short- and long-range due to the different height considered to be cruising altitude (i.e., 300 m for short-range flights and 650 m for long-range flights). If a short-range flight path had a change in speed of ±15 knots or a change in height of ±40 m over the last three timesteps and was within 984 ft/300 m above the ground, or if the flight path was ≤20 m from the ground or flight speed was ≤5 knots, it was classified as take-off/landing. Similarly, if a long-range flight path had a change in speed of ±15 knots or a change in height of ±40 m over the last three timesteps and was within 2,133 ft/650 m above the ground, or if the flight path was ≤20 m from the ground or flight speed was ≤5 knots, it was classified as take-off/landing. Take-off/landing flight paths were removed from the flying height calculations included in this section. Two examples are shown in Figure 4-1l, which display example flight paths and their corresponding change in height above the ground (m), indicating the flight segments classified as take-off/landing in grey. The short-range flight example in Figure 4-1 highlights how a flight may drop below the flying height requirement (300 m) for some time prior to landing (i.e., a gradual descent). The long-range flight example highlights an example where large changes in flying height occur above cruising altitude, which would be classified as takeoff/landing without a cruising height limitation set on the definition. Short- and long-range flights are shown in Figure 4-2. Short- and long-range flights during each season (i.e., spring, summer, and fall) are shown in Figure 4-3 to Figure 4-7.

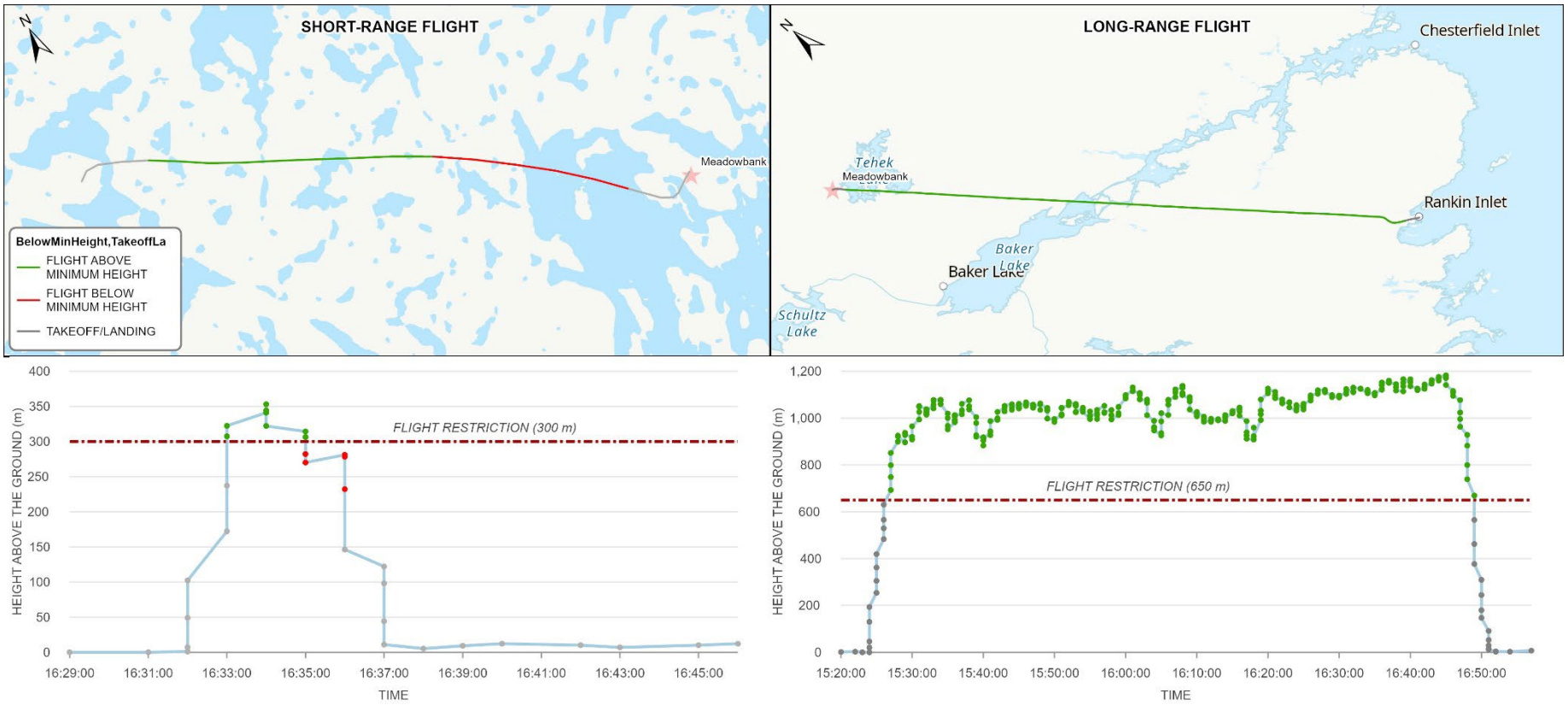
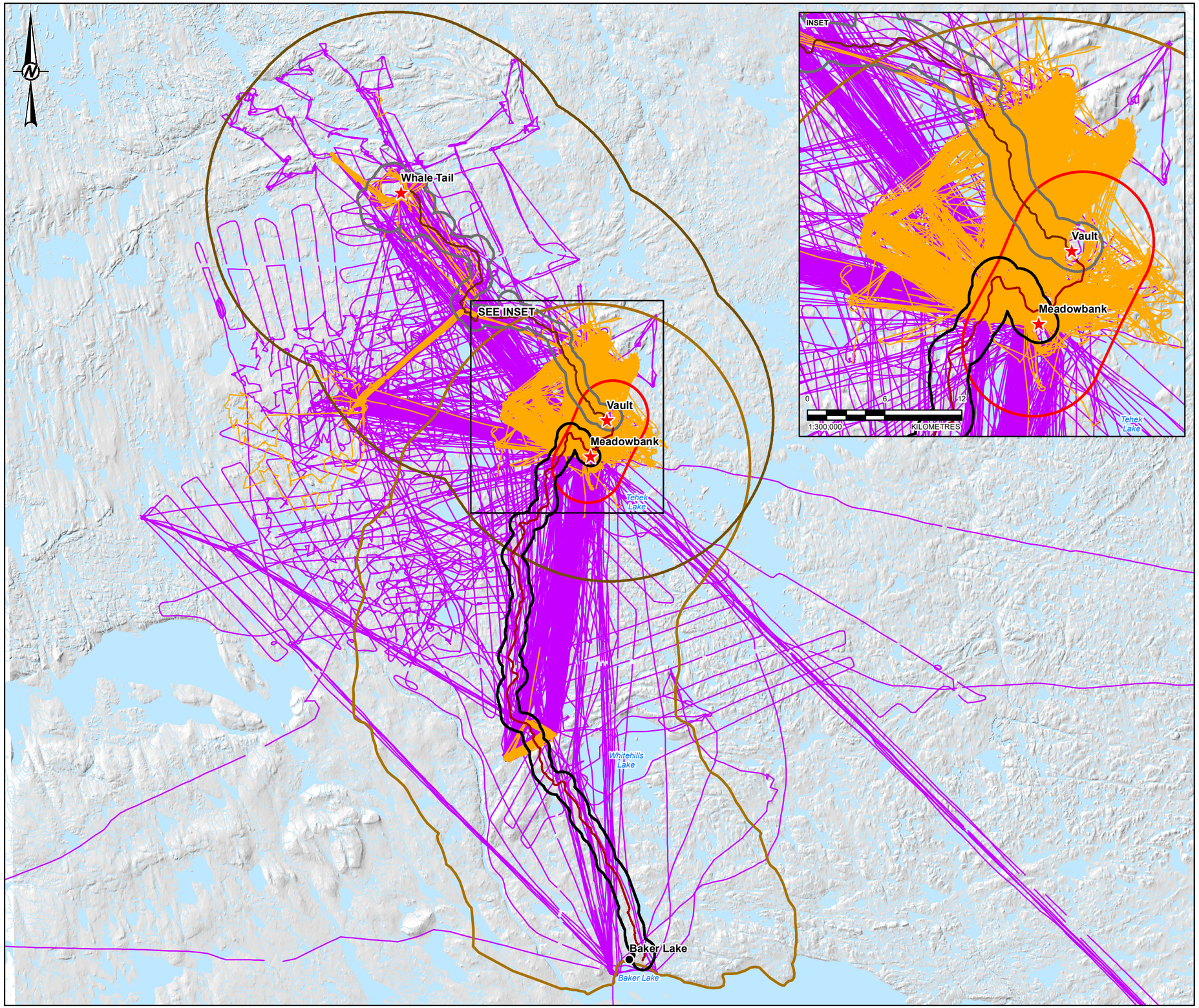


Figure 4-1: Examples of Short-Range and Long-Range Flights with Flight Segments Classified as Take-off/Landing (grey), and Remaining Flight Segments Classified as Above or Below the Minimum Required Height Above the Ground.



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)

FLIGHT PATH

- SHORT-RANGE
- LONG-RANGE
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY

0 12 24

1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MINE-RELATED HELICOPTER ACTIVITY ALONG THE ALL-WEATHER ACCESS ROAD AND WHALE TAIL HAUL ROAD, 2024

CONSULTANT

wsp

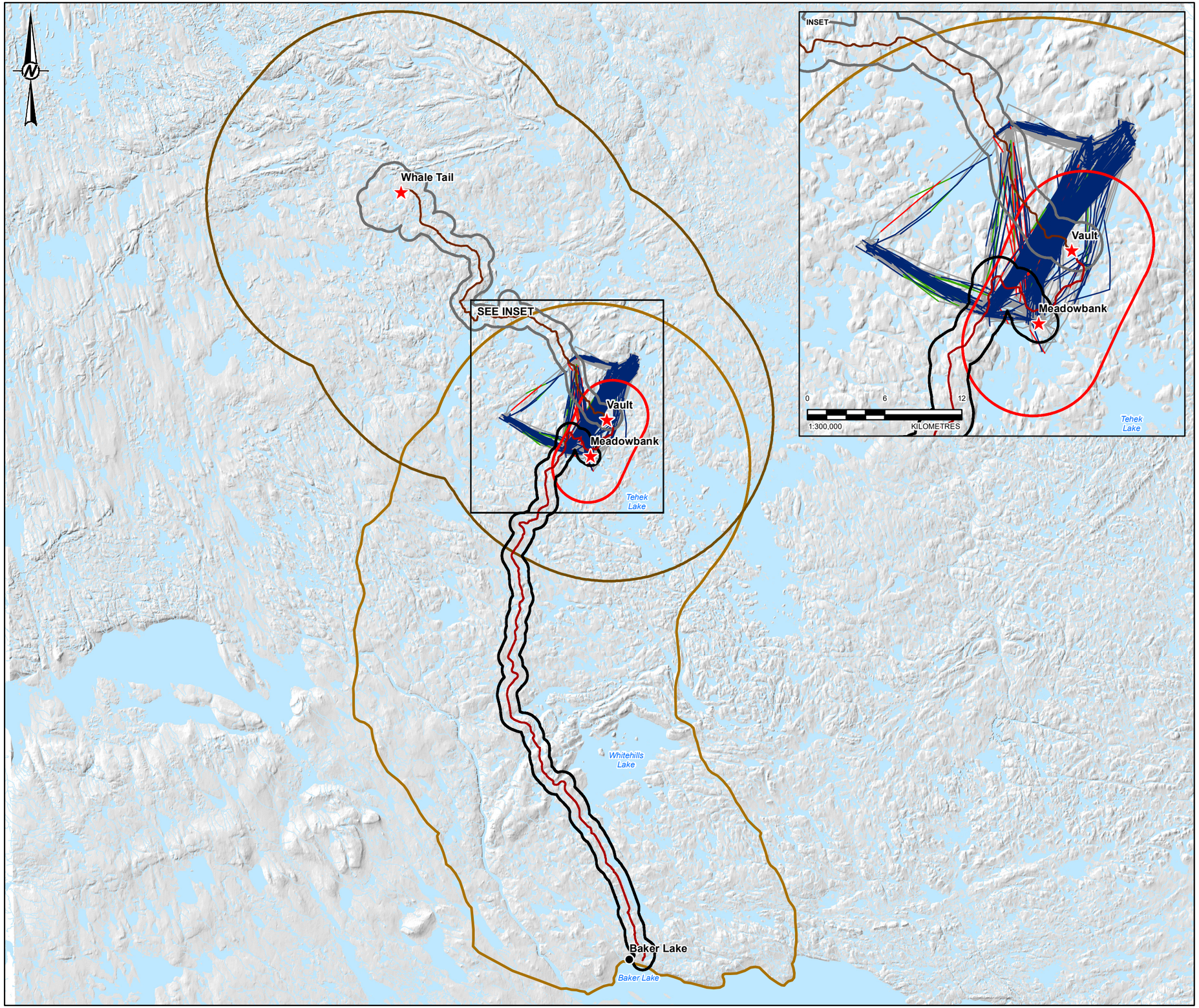
YYYY-MM-DD	2025-03-19
DESIGNED	DM
PREPARED	DM
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	4-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_04_02_HELICOPTER_ACTIVITY_2024.mxd PRINTED ON: 2025-03-19 AT: 2:26:25 PM



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)

SHORT-RANGE FLIGHT PATH

- FLIGHT ABOVE MINIMUM ALTITUDE (300 m ABOVE GROUND)
- FLIGHT BELOW MINIMUM ALTITUDE (300 m ABOVE GROUND)
- PERMISSIBLE LOW FLIGHT
- TAKEOFF/LANDING
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY

0 12 24

1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MINE-RELATED SHORT-RANGE FLIGHTS OPERATED BELOW THE MINIMUM FLIGHT ALTITUDE DURING SPRING (2024)

CONSULTANT

wsp

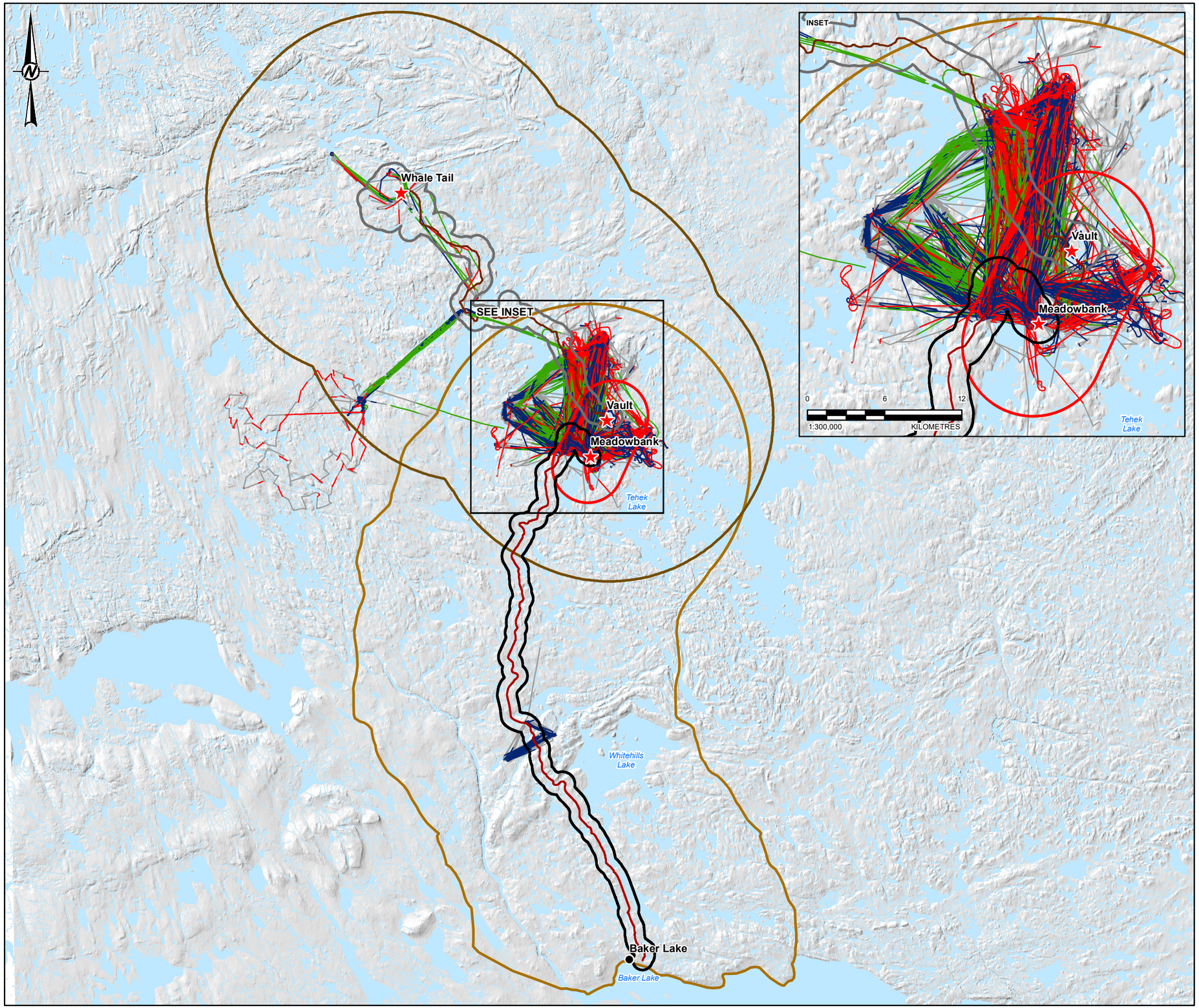
YYYY-MM-DD	2025-03-19
DESIGNED	DM
PREPARED	DM
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	4-3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604\40\04004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_04_03_HELICOPTER_SHORT_RANGE_FLIGHTS_2024_SPRING.mxd PRINTED ON: 2025-03-19 AT: 2:44:30 PM



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)

SHORT-RANGE FLIGHT PATH

- FLIGHT ABOVE MINIMUM ALTITUDE (300 m ABOVE GROUND)
- FLIGHT BELOW MINIMUM ALTITUDE (300 m ABOVE GROUND)
- PERMISSIBLE LOW FLIGHT
- TAKEOFF/LANDING
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY

0 12 24

1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MINE-RELATED SHORT-RANGE FLIGHTS OPERATED BELOW THE MINIMUM FLIGHT ALTITUDE DURING SUMMER (2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	DM
PREPARED	DM
REVIEWED	JF
APPROVED	CDLM

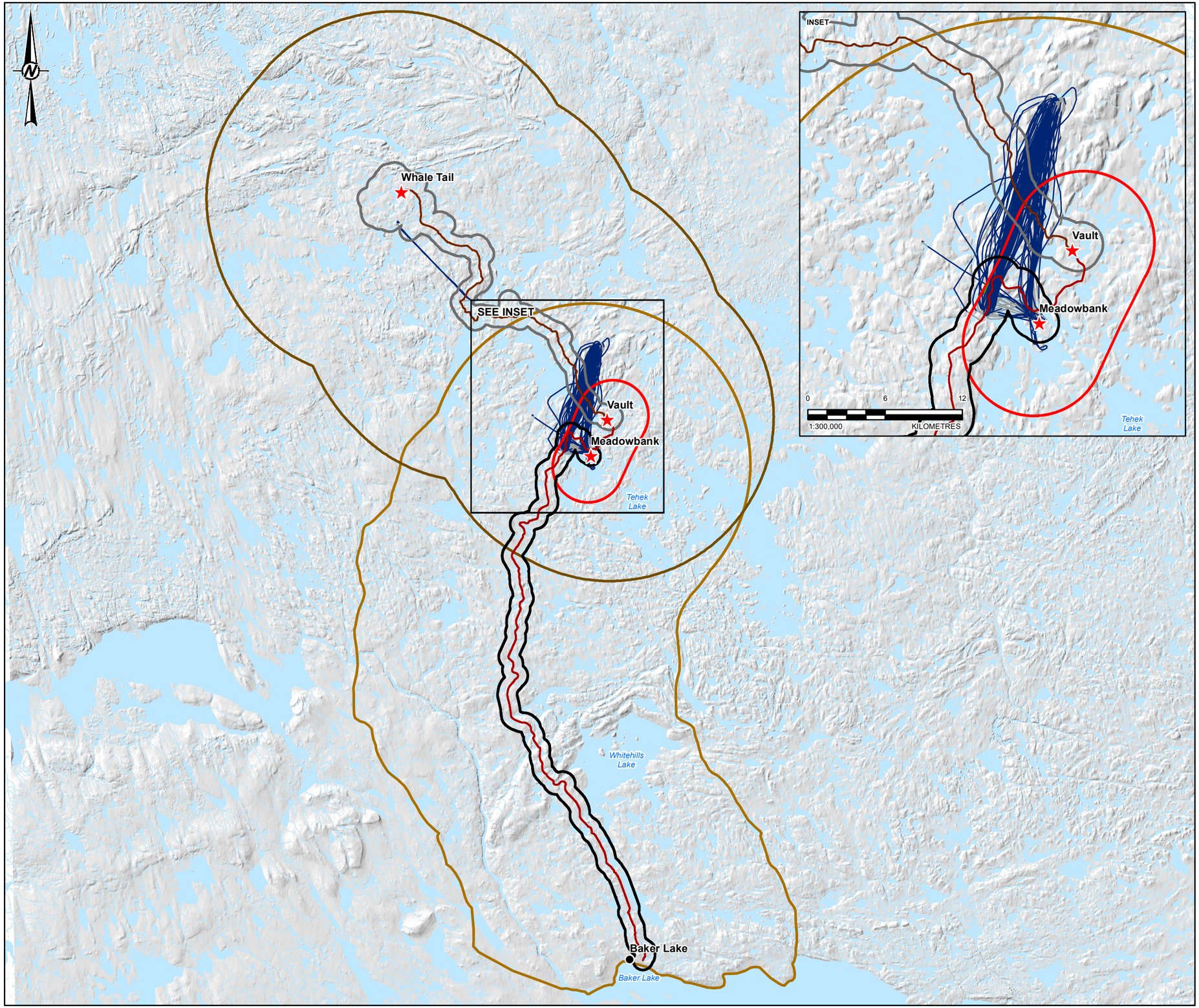
PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	4-4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9@_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_04_04_HELICOPTER_SHORT_RANGE_FLIGHTS_2024_SUMMER.mxd PRINTED ON: 2025-03-19 AT: 2:48:12 PM



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)

SHORT-RANGE FLIGHT PATH

- FLIGHT ABOVE MINIMUM ALTITUDE (300 m ABOVE GROUND)
- FLIGHT BELOW MINIMUM ALTITUDE (300 m ABOVE GROUND)
- PERMISSIBLE LOW FLIGHT
- TAKEOFF/LANDING
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY

0 12 24

1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.
COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MINE-RELATED SHORT-RANGE FLIGHTS OPERATED BELOW THE MINIMUM FLIGHT ALTITUDE DURING FALL (2024)

CONSULTANT

wsp

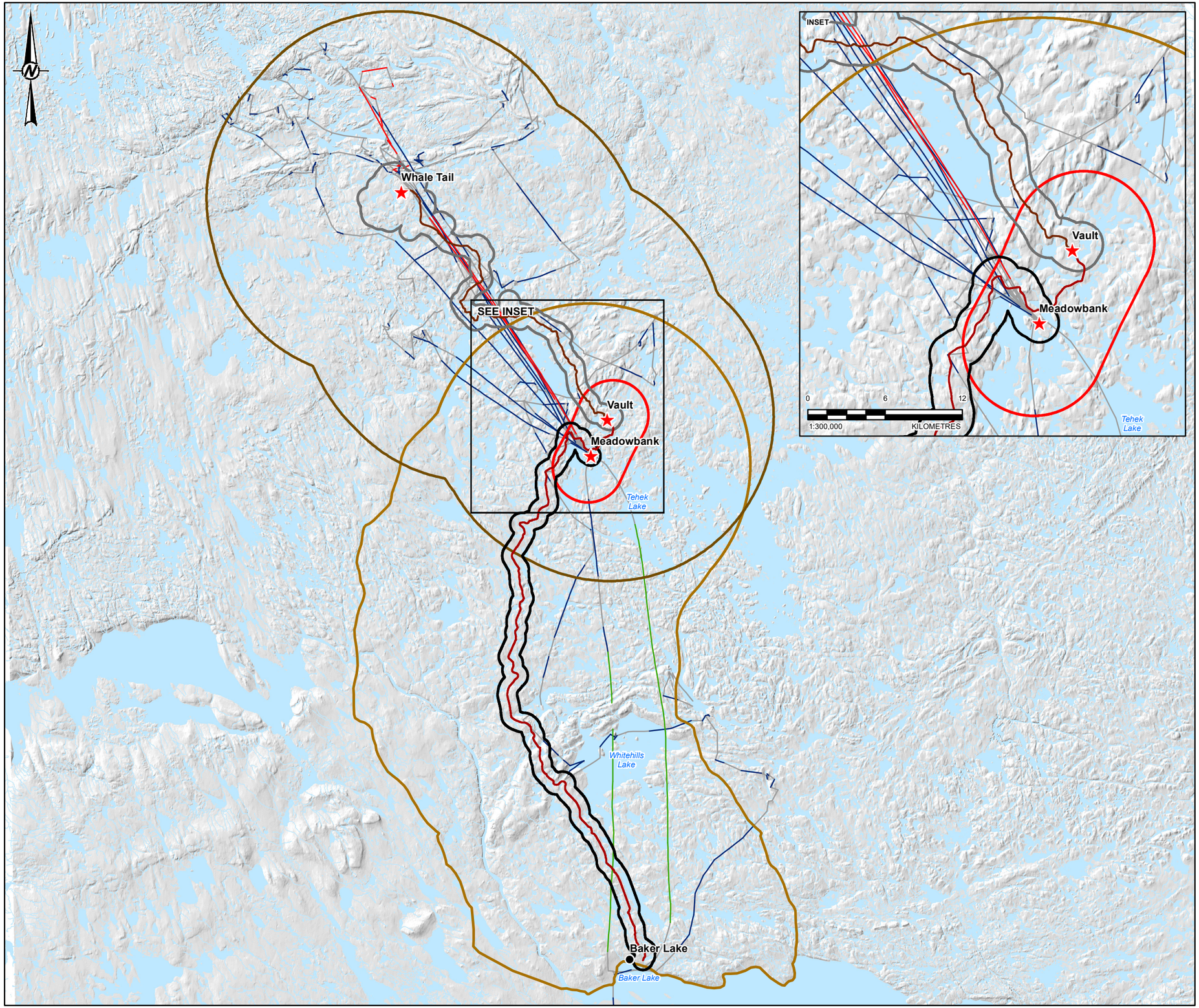
YYYY-MM-DD	2025-03-19
DESIGNED	DM
PREPARED	DM
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	4-5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604\40\04004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_04_05_HELICOPTER_SHORT_RANGE_FLIGHTS_2024_FALL.mxd PRINTED ON: 2025-03-19 AT: 2:52:06 PM



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)

LONG-RANGE FLIGHT PATH

- FLIGHT ABOVE MINIMUM ALTITUDE (650 m ABOVE GROUND)
- FLIGHT BELOW MINIMUM ALTITUDE (650 m ABOVE GROUND)
- PERMISSIBLE LOW FLIGHT
- TAKEOFF/LANDING
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY

0 12 24

1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.
COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MINE-RELATED LONG-RANGE FLIGHTS OPERATED BELOW THE MINIMUM FLIGHT ALTITUDE DURING SPRING (2024)

CONSULTANT

wsp

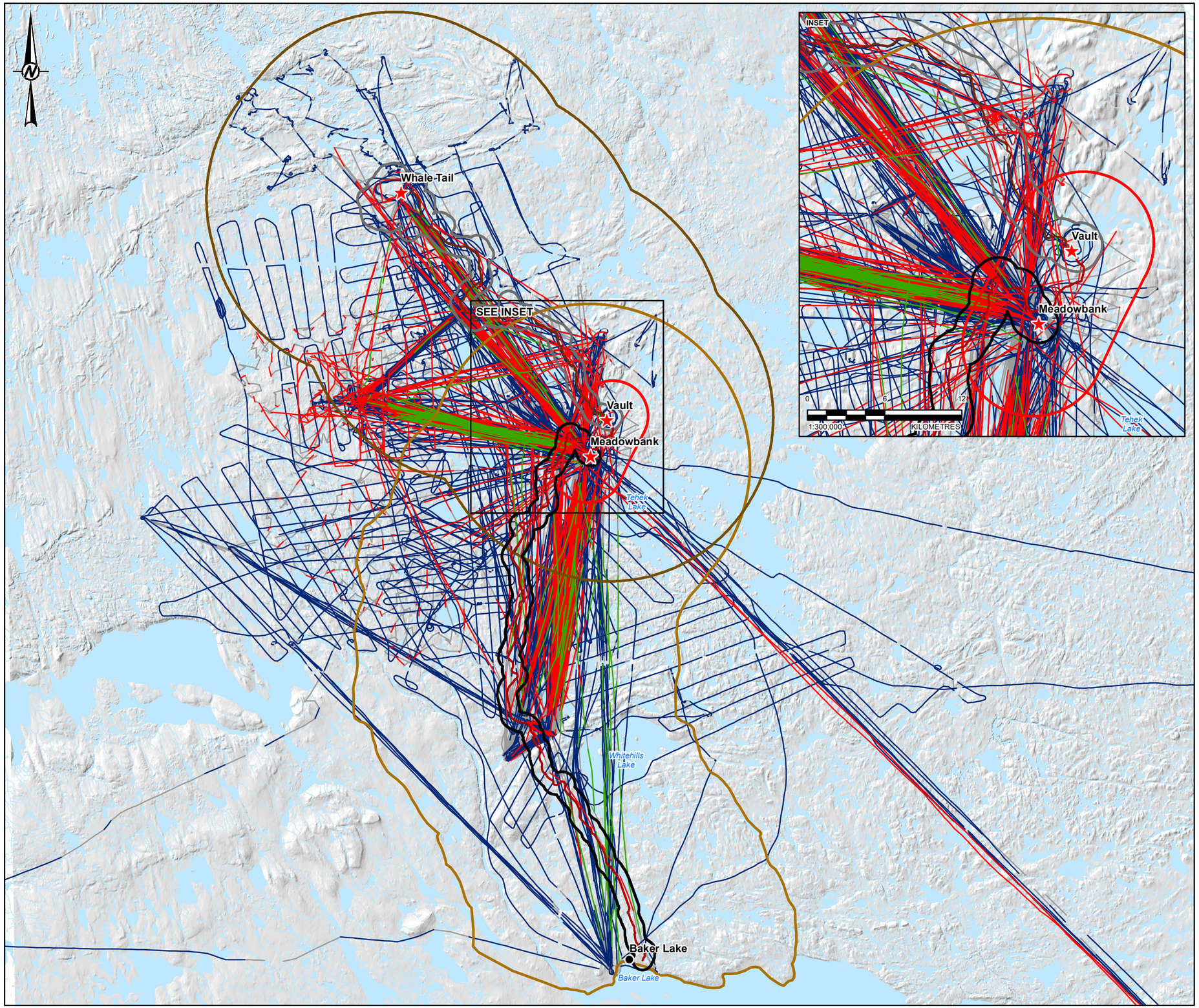
YYYY-MM-DD	2025-03-19
DESIGNED	DM
PREPARED	DM
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	4-6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604\40\04004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_04_06_HELICOPTER_LONG_RANGE_FLIGHTS_2024_SPRING.mxd PRINTED ON: 2025-03-19 AT 2:55:31 PM



LEGEND

- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)

LONG-RANGE FLIGHT PATH

- FLIGHT ABOVE MINIMUM ALTITUDE (650 m ABOVE GROUND)
- FLIGHT BELOW MINIMUM ALTITUDE (650 m ABOVE GROUND)
- PERMISSIBLE LOW FLIGHT
- TAKEOFF/LANDING
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY

0 12 24
1:600,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT
AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT
MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE
MINE-RELATED LONG-RANGE FLIGHTS OPERATED BELOW THE MINIMUM FLIGHT ALTITUDE DURING SUMMER (2024)

CONSULTANT
wsp

YYYY-MM-DD	2025-03-19
DESIGNED	DM
PREPARED	DM
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	4-7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_04_07_HELICOPTER_LONG_RANGE_FLIGHTS_2024_SUMMER.mxd PRINTED ON: 2025-03-19 AT: 2:59:15 PM

4.5.9.2 Results and Discussion

Flight length in distance (km) and hours, average cruising altitude (m) and average cruising height above the ground (m) were determined for each flight leg using the ID field described above. For each season, the number of flying dates, number of flights and number of flying hours were summarized (Table 4-10). The average flight distance and total distance flown within the Meadowbank and Whale Tail RSAs are also shown. A more detailed breakdown of flight hours is shown for short-range (Table 4-11) and long-range flights (Table 4-12). By season, total flight hours are summarized based on time spent above or below the minimum flying height described by the project specific flight restrictions (300 m for short-range flights; 650 m for long-range flights), excluding time classified as takeoff/landing or for a permissible reason of low flight. The average cruising height above the ground was determined for each season using the average cruising height above the ground (m) calculated for each flight leg, excluding takeoff/landing and any permissible low flights. A full catalog of flight details for all flights, including pilot comments are shown in Appendix E.

Table 4-10: Summary of Helicopter Flights in 2024

Season[a][d]	Flight Days	Number of Flights	Total Distance Flown within the RSA (km)[b]	Average Flight Leg Distance (km)[c] (mean ± SD)	Total Duration (hours)
Spring	33	181	10,495.8	59.9 ± 55.4	107.5
Summer	114	1165	71,802.4	65.1 ± 64.8	739.7
Fall	5	40	2,730.1	68.2 ± 68.7	24.2

a) Table includes data only for flights where both a flight report and helicopter GPS data are available.

b) Represents total length of flight paths intersecting with the combined RSA (Whale Tail RSA and Meadowbank RSA).

c) Represents average flight leg distance, including all flights whether or not they occurred within the RSAs.

d) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15.

km = kilometres; SD = standard deviation.

Five percent of all short-range flight hours in 2024 (24.8 hours) were identified below the minimum requirement (300 m), without documentation of the purpose of low flight, which is an improvement from 2023 (11% [27.8 hours] of 2023 short-range flight hours identified below 300 m). Short-range flights below 300 m occurred most frequently during summer (22.7 hours), when the number of flights and flight hours were also highest. The average flying height was highest for short-range flights during spring (240.4 ± 71.5 m), which is also visible in Figure 4-8 while average flying height during summer varies greatly but is lower on average.

Similar to short-range flights, the majority of long-range flights took place during summer. There were 16% of all long-range flight hours in 2024 (61.6 hours) that were identified below the minimum height requirement, without documentation of the purpose of low flight. This is an improvement compared to the proportion of long-range flight hours identified below 650 m in 2023 (32% or 28.9 hours identified in 2023). The average flying height of all long-range flight legs during summer was 395.0 ± 133.5 m, which was lower than the average flying height of long-range flight legs conducted during spring (534.0 ± 405.7m). As all long-range flights that occurred during fall were flagged as permissible low flights due to their reason for flight (e.g., environmental surveys) or from pilot comments (e.g., due to weather and smoke), this metric is not available for fall long-range flights. Figure 4-9 displays the distribution of average flying heights for all long-range flight legs conducted during spring and summer. Overall, 10% of all flight hours in 2024 (86.4 hours) were identified as operating below the Project specific flight restrictions, without documentation for the purpose of low flight. While improvements were observed in the percentage of 2024 flight hours found to adhere to project specific flight restrictions compared to 2023 (down from 16% of flight hours in 2023 [56.7 hours]), improvements may be partially related to changes in the definition of takeoff/landing.

Helicopter use varies across years and seasons and is based on operations, including establishment of remote camps and the amount of exploration. However, Figure 4-8 and Figure 4-9 indicate that flying height identified within seasons and flight-ranges is varied. This may be due to reasons such as, but not limited to:

- differences in flying height between flight-types (e.g., passenger flights [flight codes: PaxLoc, CrewChg, etc.] are often conducted at lower heights than ferry flights [flight code: Ferry])
- differences between aircraft and/or pilots (e.g., one or more aircrafts flying lower than others)
- differences between altimeter and GPS readings
- inaccuracies or generalizations of the recorded reason for flight (e.g., only recording one reason for flight even if the flight had multiple purposes)
- inaccurate or missing comments (e.g., not recording a reason if low flight was required)

Inaccuracies in the calculated flight height may be responsible for many flights being flagged for low flight. It is important to note that pilots have instruments in the helicopters showing their current height above ground level, but this information is not part of the GPS system. While the project flight restrictions reference flying height about the ground (m), data provided from the aircraft tracking system provides the flying altitude (meters above sea level). To obtain flying height about the ground, the ground height above sea level must be accounted for. This was completed using the Arctic Digital Elevation Model, which provides the ground elevation for high resolution pixels but is generalized for large area download (greater than 50 m x 50 m area on the ground). This pixel size may generalize topography and cause inaccuracies in the flying height calculation. Obtaining the height above the ground directly from the aircraft tracking systems (if available) or obtaining a higher resolution digital elevation model (e.g., 10 m x 10 m resolution or better) may improve flying height calculations. Additionally, as differences between flying height has been observed between aircrafts, calibration of equipment may improve flying height data. Many of the average heights that were identified as below the target thresholds were identified by the pilots as having flown above the required threshold according to their onboard instruments. Agnico Eagle will continue to work with helicopter contractors to improve helicopter data collection, including collection of detailed notes for flight classification.

Table 4-11: Summary of Short-Range Helicopter Flights in 2024

Season[a]	Number of Flights[b]	Duration (hours)					Average Height (m) Flights[d] (mean ± SD)	Percentage of Flights Below Minimum Height[e]
		Take-off/ Landing	Permissible Low Flights[c]	Above Minimum Height[d]	Below Minimum Height[d]	Total		
Spring	173	62.0	27.8	1.4	2.2	93.4	240.4 ± 71.5	2.3%
Summer	704	232.3	77.6	27.5	22.7	360.1	229.2 ± 98.9	6.3%
Fall	31	8.6	11.0	0.0	0.0	19.6	NA	0.0%
Total	**908**	**302.9**	**116.4**	**28.9**	**24.8**	**473.0**	**234.8 ± 85.2**	**5.2%**

a) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15.

b) Table includes data only for flights where both a flight report and helicopter GPS data are available.

c) Represents flights where flight activities with expected low altitudes were performed (e.g., slinging), or an adequate reason for low flight was provided (e.g., weather, emergency, etc.).

d) Values exclude takeoff/landing and low permissible flights; minimum height for short-range flights is 300 m; values shown in metres above the ground. Flight classification remains challenging, and results should be interpreted with caution.

e) Percentage of flight duration below the minimum height for short-range flights using a threshold of 300 m, excluding permissible low flights.

m = metres; SD = standard deviation.

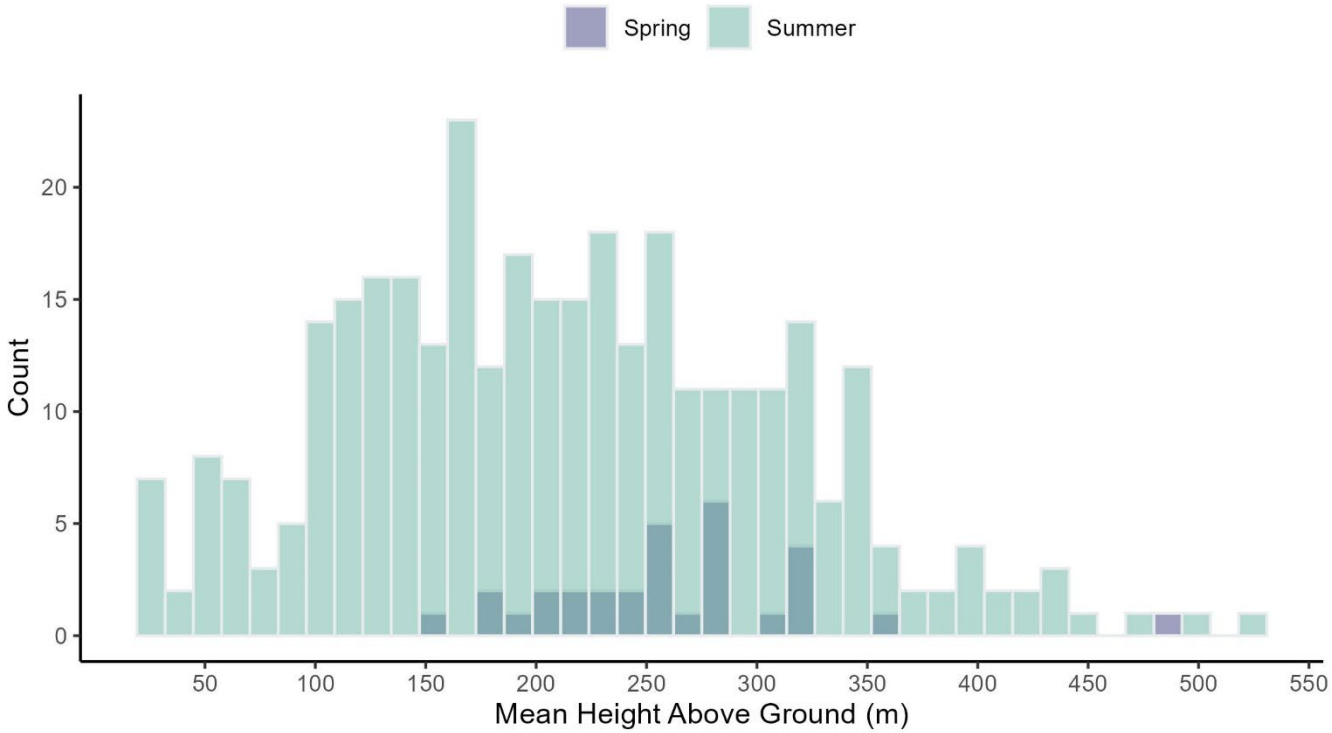


Figure 4-8: Distribution of the Average Cruising Height (m) of Short-Range Flights, Excluding Take-off/Landing and Permissible Low Flights

Table 4-12: Summary of Long-Range Helicopter Flights in 2024

Season[a]	Number of Flights[b]	Duration (hours)					Average Height (m)[d] (mean ± SD)	Percentage of Flights Below Minimum Height[e]
		Take-off/ Landing	Permissible Low Flights[c]	Above Minimum Height[d]	Below Minimum Height[d]	Total		
Spring	8	8.0	5.0	0.5	0.6	14.1	534.0 ± 405.7	4.6%
Summer	462	179.7	130.9	8.0	61.0	379.6	395.0 ± 133.5	16.1%
Fall	9	1.7	2.9	0.0	0.0	4.7	N/A	0.0%
Total	**479**	**189.4**	**138.8**	**8.5**	**61.6**	**387.4**	**394.6 ± 121.7**	**15.5%**

a) Spring = Apr 1 to May 25, Summer = May 26 to Sep 21, Fall = Sep 22 to Dec 15.

b) Table includes data only for flights where both a flight report and helicopter GPS data are available.

c) Represents flights where flight activities with expected low altitudes were performed (e.g., slinging), or an adequate reason for low flight was provided (e.g., weather, emergency, etc.).

d) Values exclude takeoff/landing and low permissible flights; minimum height for short-range flights is 300 m; values shown in metres above the ground. Flight classification remains challenging, and results should be interpreted with caution.

e) Percentage of flight duration below the minimum height for short-range flights using a threshold of 300 m, excluding permissible low flights.

m = metres; SD = standard deviation.

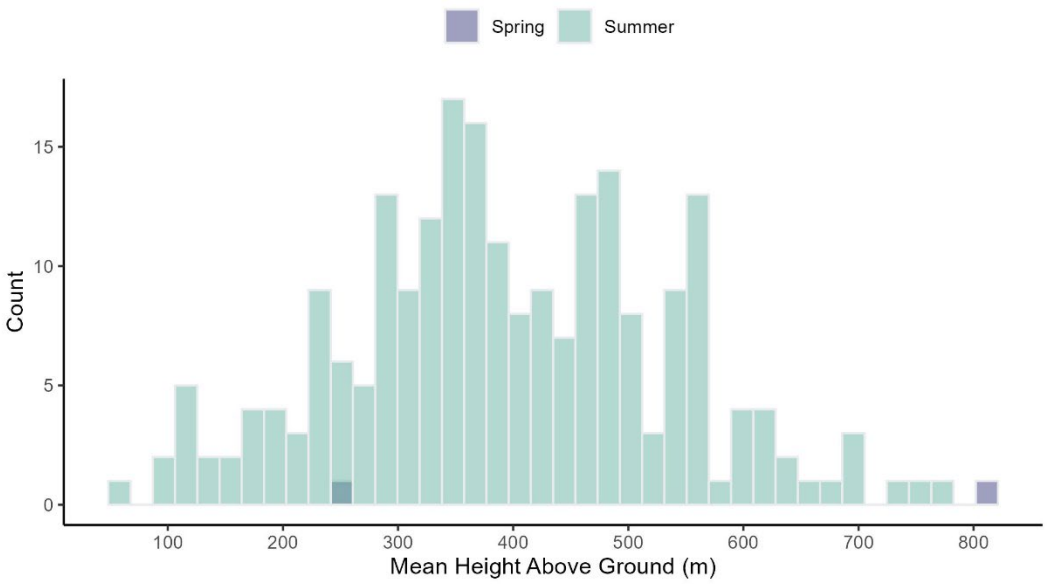


Figure 4-9: Distribution of the Average Cruising Height (m) of Long-Range Flights, Excluding Take-off/Landing and Permissible Low Flights

4.5.10 Helicopter Activity and Wildlife

As a part of the project flight restrictions, pilots are made aware to avoid flocks of migratory birds by 1,100 m vertically and 1,500 m horizontally, avoid groups of caribou and muskox larger than 50 by 1,000 m vertically and 1,500 m horizontally, and avoid known raptor nests. Locations of these flights in relation to caribou, muskox, and raptor nests was assessed using the helicopter timestep locations (described above), the road survey point locations, caribou satellite collar data, and known nest locations.

4.5.10.1 Methods

Potential helicopter and caribou, muskox, and raptor nest co-occurrences were assessed using the *sf* package in R v4.4.2 (2024). This was done by overlapping buffered flight locations with known or estimated caribou, muskox, or raptor nest locations. The flight locations were buffered with an avoidance zone based on flight restriction parameters (1,500 m for caribou and muskox and 100 m for raptor nests). The buffered area of 100m for raptor nests was selected to assign an area around the nest that would be considered as a flyover (given the low likelihood of a point and flight line perfectly overlapping). The *st_intersects* function was then used to check if animal/nest observations fell within any buffered flight location. For satellite collar data and nest data, the spatial locations of the animals/nests were known and could be intersected with flight locations directly. For road surveys, the data provided the locations of the observers, who estimated the distance of the animals from the road. As such, for the road surveys, this estimated distance was used to buffer the road within a 2,000 m radius of the known observer locations. A 2,000 m radius was chosen to balance view distance with precision. Areas not visible from the road, based on elevation (Agnico Eagle, 2020b), were excluded from these buffered locations. An estimated co-occurrence was then calculated as the intersection of these buffered observer location and a buffered flight location. Only intersections on the same side of the road were retained.

Potential co-occurrences were also defined within a time buffer. A collared caribou and a flight location was considered to have co-occurred if the flight location time was within 1 hour of the GPS fix time. A large time window was used because GPS fixes only occur every 4 hours. Road surveys do not have the same 4 hours time window as GPS fixes. Therefore, the temporal restriction for determining a co-occurrence for these observations was set to 10 minutes. For both GPS fixes and road surveys, the difference between the flight timestamp and an observation timestamp was calculated as the absolute difference between the two times. As it is unknown what occurred during this time gap, this time difference is referred to hereafter as event uncertainty. As the times and dates of the raptor nest usage were unknown, no temporal filters could be applied to these data.

The final result of temporal and spatial filtering was a set of potential co-occurrences with takeoffs and landings excluded. These data were inspected to ensure accuracy and to remove double-counts. Double-counts occurred when flight time locations were close together and overlapped the same observation on the same flight leg. In this situation, the flight location with the least event uncertainty was retained. If two observations occurred at the same place at the same time, the observation with the highest group estimate was retained.

4.5.10.2 Results

In total, there were 25 ungulate-flight co-occurrences in 2024. Of these, only one was a collared caribou. This co-occurrence was with a low-level raptor survey during the summer. The event uncertainty in this case was 24.43 minutes. The remaining 24 co-occurrences were with road survey locations. Seventeen of these occurred during summer (5 caribou and 12 muskox), and 7 during spring (5 caribou and 2 muskox). No group size recorded for these observations exceeded the 50 individual threshold. The largest group for any co-occurrence event was 13 caribou on April 28th with a flight height of 184 m. The event uncertainty for this case was 4.65 minutes. The flight was a low-level sling flight. A co-occurrence event with 13 individuals was a significant anomaly ($Z = 2.19$, $p = 0.028$). The reported group sizes for co-occurrence events on average was 4.21 individuals (SD = 4.01). The most common group size was 1 individual. The mean flight height was 218.3 m (SD = 108.38). The majority of the flights (20) were cleared for low heights or provided a sufficient comment. The remaining 5 co-occurrence events primarily involved summer passenger flights (Table 4-13). Across road survey co-occurrences, event uncertainty averaged 3.24 minutes and ranged from 0.05 to 8.52 minutes.

In 2024, there were 10 potential raptor nest-flight co-occurrence events with 3 peregrine falcon nests and 1 gyrfalcon nest. The majority (7) were confined to a single peregrine falcon nest at Quarry 22 which is along the AWAR near Meadowbank Mine. The remaining three occurred at separate nesting locations (Table 4-13). Most events (5) occurred during the summer. The average height was 236.69 m (SD = 205.43). Nine of the 10 involved flights were cleared for a low-level flying or reported performing low level surveys. The remaining flight was a passenger flight.

Table 4-13: Summary of Wildlife and Flight Co-occurrences

Date	Season	Species	Group Size	Height (m)	Reason	Low Eligible[a]	Location	Event Uncertainty (min)
Satellite Collar Co-occurrences[b]								
08-07	Summer	Caribou	-	90.73	Passenger	Yes	-	24.43
Road Survey Co-occurrences								
04-28	Spring	Caribou	13	184.28	Slinging	Yes	HAUL ROAD	4.65
05-06	Spring	Caribou	9	151.59	Slinging	Yes	AWAR	5.32
05-24	Spring	Muskox	2	174.53	Slinging	Yes	AWAR	2.37
05-24	Spring	Caribou	2	246.57	Slinging	Yes	AWAR	2.37
05-24	Spring	Muskox	2	187.52	Slinging	Yes	AWAR	0.28
05-24	Spring	Caribou	2	147.99	Slinging	Yes	AWAR	0.28
05-25	Spring	Caribou	9	355.95	Passenger	No	AWAR	1.30
05-26	Summer	Caribou	3	254.65	Passenger	No	AWAR	5.08
06-09	Summer	Muskox	1	183.89	Slinging	Yes	AWAR	0.05
06-09	Summer	Caribou	7	176.98	Passenger	Yes	AWAR	1.07
06-13	Summer	Muskox	2	118.68	Slinging	Yes	AWAR	3.83
06-19	Summer	Muskox	2	185.06	Passenger	No	AWAR	0.65
06-24	Summer	Caribou	8	275.52	Passenger	No	AWAR	8.52
06-27	Summer	Muskox	1	275.52	Slinging	Yes	HAUL ROAD	3.42
07-01	Summer	Muskox	1	217.84	Slinging	Yes	HAUL ROAD	2.95
07-01	Summer	Muskox	1	346.30	Slinging	Yes	HAUL ROAD	1.60
07-03	Summer	Muskox	9	83.15	Passenger	No	AWAR	4.48
07-03	Summer	Muskox	9	562.46	Slinging	Yes	AWAR	3.25
07-11	Summer	Muskox	1	178.76	Passenger	Yes	AWAR	3.03
07-16	Summer	Muskox	1	243.98	Slinging	Yes	AWAR	6.73
07-17	Summer	Muskox	1	191.35	Passenger	Yes	AWAR	6.98
08-07	Summer	Caribou	2	396.03	Passenger	Yes	HAUL ROAD	4.38
08-13	Summer	Caribou	1	139.97	Passenger	Yes	HAUL ROAD	0.23
09-17	Summer	Muskox	12	88.21	Passenger	Yes	AWAR	4.85
Raptor Nest Co-occurrences								
05-25	Spring	PEFA	-	197.03	Slinging	Yes	Quarry 22	-
05-25	Spring	PEFA	-	42.04	Wildlife	Yes	Quarry 21	-
05-25	Spring	PEFA	-	226.63	Slinging	Yes	Quarry 22	-
07-27	Summer	PEFA	-	769.44	Slinging	Yes	Quarry 22	-
07-29	Summer	PEFA	-	306.77	Passenger	No	Quarry 22	-
08-09	Summer	PEFA	-	59.25	Passenger	Yes	Quarry 22	-
08-22	Summer	GRFA	-	190.51	SAR	Yes	Quarry 07	-
08-22	Summer	PEFA	-	280.60	SAR	Yes	Quarry 02	-
09-24	Fall	PEFA	-	146.43	Slinging	Yes	Quarry 22	-
09-25	Fall	PEFA	-	148.21	Slinging	Yes	Quarry 22	-

AWAR = All Weather Access Road; SAR = Search and Rescue; PEFA = Peregrine Falcon; GRFA = Gyrfalcon
(a) Low flight eligibility was determined from flight logs. See section 4.5.9 for details
(b) Collar caribou locations were derived from GPS coordinates, and the group size could not be determined from GPS data.
(c) The group size for raptor nests was a single nest. No event uncertainty based on time could be calculated.

4.5.10.3 Discussion

This analysis compared caribou and other wildlife observations from road surveys, collar locations, and known raptor nest locations to flight tracks as a coarse assessment of potential wildlife co-occurrences. Location data from caribou collars and raptor nests were more accurate, which facilitated realistic comparisons between wildlife observations and flight tracks. Helicopter flyovers with raptor nests occurred on 10 occasions, specifically near Quarry 22, which is likely due to the fact the quarry is located close to the Meadowbank Mine and may be near helicopter take off and landing sites. Nine of the 10 co-occurrences were near peregrine falcon nests. A literature review of animal responses to helicopter disturbances identified peregrine falcons as having a limited response to most close proximity flights (Anderson 2007). Caribou collars intersected with buffered flight paths (1,500 m) on 1 occasion, indicating that interactions of this type occur infrequently.

Road survey comparisons to flight tracks provided a coarse review of potential co-occurrences because coordinates for observations were from the road, not at the actual location of wildlife. Therefore, intersections between buffered wildlife observations and buffered helicopter tracks could represent co-occurrences within 1,500 m or as far as ~5500 m or more. Given this uncertainty, these results should be interpreted with caution. Ungulate-helicopter co-occurrences within an estimated 1,500 m buffer did not exceed group size thresholds of 50 animals on any occasion (Table 4-13) Observations with refer animals co-occurred with flight data on 7 occasions during spring and 17 occasions during summer. Overall, instances of helicopters co-occurring near wildlife were relatively rare, though data available are coarse and comparisons are largely limited to areas near roads. The exception is in instances where collared caribou were identified near helicopter tracks. Even with data limitations, helicopter flights mainly occur during summer (84% of flights), meaning that the majority of flights are outside of the sensitive seasons and mainly occur during a time of year with fewer ungulates near the Project. Agnico Eagle will continue working with helicopter contractors to minimize interactions with wildlife.

4.6 Accuracy of Impact Predictions

A summary of the impact predictions identified in the TEMP version 7 (Agnico Eagle 2019) that are evaluated, in part, by the Mine site ground surveys is presented in Table 4-14. Specifically, the 2024 Mine site ground survey monitoring data were compared to the impact prediction thresholds and the provision of adaptive management, as either a necessary or proactive measure. The Project-related mortality threshold for waterbirds was exceeded in 2024. No other thresholds were exceeded. The monitoring results support that the mitigation implemented in 2024 was effective at minimizing Project-related mortalities to wildlife.

Table 4-14: Accuracy of Impact Predictions – Mine Site Wildlife Disturbances

Potential Effect	Threshold	Threshold Exceeded? (2024)	Adaptive Management Implemented	Monitoring Methods
Sensory Disturbance	No threshold but Decisions Trees followed when caribou are seen near mine facilities	Not Applicable	YES Use of Decision Tree for Management and Monitoring.	Satellite-collaring data Road surveys Daily and weekly pit and Mine-site ground surveys Incidental wildlife reporting
Disturbance to Nesting Raptors	Raptor nest failures will not be caused by Project-related activities. Threshold is one nest failure per year	NO	YES Mine-related activity restricted within quarries with nesting activity.	Daily and weekly pit and Mine-site ground surveys Incidental wildlife reporting Dedicated raptor nest surveys Road surveys
Disturbance of Nesting, Roosting or Moulting Waterfowl	Mine facilities and activities will not affect the breeding success of waterbirds occurring in the area or disturb large concentrations of roosting or moulting waterbirds. Threshold level is one nest failure per year	NO	NO	Daily and weekly pit and Mine-site ground surveys Incidental wildlife reporting
Project-related Mortality	Destruction of two problem grizzly bear, wolverine, or wolf per year	NO	NO	Daily and weekly pit and Mine-site ground surveys Wildlife deterrents and mortality reporting
Project-related Mortality	Two caribou or muskoxen mortality per year because of Project-related activities (e.g., falling into pits, tailing, sludge or other means)	NO	NO	Daily and weekly pit and Mine-site ground surveys Incidental wildlife reporting Wildlife mortality reporting
Project-related Mortality	Raptors and waterbirds will not be killed at the Mine site. Threshold is one individual per year	YES – six long-tailed duck mortalities	NO This is a rare occurrence and is not expected to be repeated.	Daily and weekly pit and Mine-site ground surveys

4.7 Management Recommendations

The 2024 Mine site ground surveys were an effective source of monitoring to address the impact predictions for managing ungulates, predatory mammals, nesting raptors, and Project-related mortalities. Mitigation implemented in 2024, and previous years continues to be effective at minimize Project-related injuries and mortalities. The following are specific management recommendations for the Mine site ground survey monitoring program:

- Complete wildlife incident reports, according to the TEMP version 7, including deterrence events (Agnico Eagle 2019). All wildlife deterrence events are currently submitted to the EQuIS database.
- Continue to conduct formal weekly pit and Mine surveys to document wildlife activity and to verify that effects to wildlife are not occurring from Project-related activities.
- Continue raptor nest monitoring within the Meadowbank and Whale Tail LSAs, and along the AWAR and WTHR.
- Continue to document the use of deterrents to prevent habituation of wildlife near the Project or to relocate problematic wildlife.
- Continue to apply the Wildlife Protection and Response Plan (Appendix C, 2019 TEMP version 7), which includes waste provisions, training, incident reporting, and protocols for problem wildlife. Efforts should be taken to ensure all perishable garbage is directed to the composter and other proper waste disposal facilities.
- Continue training and education to ensure that incidental wildlife reporting is completed by all Mine site personnel so that Environment personnel can remain informed of pertinent wildlife-related activity near the Mine site.
- Monitor tailings ponds daily during the waterbird migration period, beginning in mid-May. Increase the frequency of deterrent use if required.
- Continue to gather detailed information (e.g., sex, age, photos) on deceased animals and include in incident reports, when possible.
- Review of methods with the TAG and helicopter contractor to discuss decisions made for take-off/landing and short versus long-range flights.
- Improve comments for reasons for low flights, even if flying low for only a portion of the flight.

5.0 WILDLIFE HABITAT MONITORING

5.1 Overview

The wildlife habitat mapping monitoring program was developed to describe the overall area of different Ecological Land Classification (ELC) units lost due to Mine-related activities (i.e., during construction, operation, decommissioning, and post-closure phases) at three primary locations: Meadowbank Main and Vault sites (which together encompass the Mine site), the AWAR, and the Whale Tail Mine and WTHR.

The initial strategy in the impact assessments for Meadowbank and Whale Tail was to compare predicted habitat losses (i.e., from the environmental assessments) to actual losses Mine development to; however, subsequent regulatory approvals, regular infrastructure extensions and expansions, and changes to the Project, and subsequent regulatory approvals, made this approach difficult to implement. The current approach is to compare habitat losses from development to permitted areas, which encompass all proposed development. Habitat mapping monitoring is completed every three years post-construction, or if changes are greater than 25% of the overall Mine site footprint from the previous evaluation. The last comprehensive analysis was completed in 2021, therefore the 2024 report includes a comprehensive analysis. The next comprehensive analysis is scheduled for the 2027 reporting year unless changes are greater than 25% between consecutive years before 2027.

5.2 Objective

The primary initial objective of the habitat mapping monitoring program was to confirm that habitat losses identified in the TEMP (Agnico Eagle 2019) and the Whale Tail FEIS Addendum (Golder 2018) for the Mine sites, haul roads, and AWAR, plus any subsequent approved extensions, have not exceeded threshold limits. Beginning in 2018, habitat losses are compared to permitted areas, which encompass Mine development areas. A summary of each monitoring parameter, predicted losses, permitted areas, and thresholds for the Meadowbank Mine and Whale Tail Mine components is included in Table 5-1 and Table 5-2, respectively.

For Meadowbank and the AWAR, ELC unit losses were calculated using two different ELC layers, including the original spatial layer from the 2005 EIS (Cumberland 2005) and then a newer ELC spatial layer was applied (Dougan & Associates 2015), which is the Government of Nunavut Kivalliq Ecological Land Classification (KELC) Map Atlas (Campbell et al. 2012). In Table 5-1 data from the Terrestrial Environmental Management Plan (TEMP; Agnico Eagle 2019), 2021 Wildlife Summary Report (Golder 2022), and 2005 Environmental Impact Statement (EIS; Cumberland 2005) was occasionally used (see footnotes) when 2024 data using a new land classification system was not deemed adequate to capture land use changes. See Section 5.4 for more information on land classification.

Table 5-1: Habitat Mapping Monitoring Parameters, Predicted Footprint Losses, Permitted Areas, and Thresholds for the Meadowbank Mine, All-Weather Access Road

Monitoring Parameter	Mine Site Predicted Loss	Mine Site Permitted Area	AWAR Predicted Loss	Threshold
Wildlife Habitat	1,130 ha[a]	1,532 ha[a]	180 ha[ab]	>5% Predicted
Ungulate – High Suitability Habitat	372 ha (growing)[a] 280 ha (winter)[a]	531 ha (growing)[a] 407 ha (winter)[a]	34 ha (growing)[c] 107 ha (winter)[c]	>10% Predicted
Small Mammals – High Suitability Habitat	Given the minimal effects associated with the Meadowbank Project, habitat loss effects on Small Mammals were screened out during the FEIS (Golder 2016)			
Waterbirds – High Suitability Habitat	274 ha[a]	417 ha[d]	16 ha[c]	>10% Predicted
Breeding Birds – High Suitability Habitat	594 ha[a]	736 ha[d]	86 ha[c]	>10% Predicted

(a) Based on 2021 Wildlife Summary Report (Golder 2022)
(b) Permitted area along the AWAR is 455 ha
(c) Based on 2024 footprint and 2005 EIS (Cumberland 2005)
(d) Based on TEMP version 7 (Agnico Eagle 2019)

Table 5-2: Habitat Mapping Monitoring Parameters, Predicted Footprint Losses, Permitted Areas, and Thresholds for the Whale Tail Mine and Haul Road

Monitoring Parameter	Whale Tail Predicted Loss	Whale Tail Permitted Area	Threshold
Wildlife Habitat	775 ha[a]	1,584 ha[c]	>5% Predicted
Ungulate – High Suitability Habitat	22 ha (growing)[b] 614 ha (winter)[b]	58 ha (growing)[c] 1,116 ha (winter)[c]	>10% Predicted
Small Mammals – High Suitability Habitat	Given the minimal effects associated with the Meadowbank Project, habitat loss effects on small mammals were screened out during the FEIS (Golder 2016)		
Waterbirds – High Suitability Habitat	Given the minimal effects associated with the Meadowbank Project, habitat loss effects on waterbirds were screened out during the FEIS (Golder 2016)		
Breeding Birds – High Suitability Habitat	Given the minimal effects associated with the Meadowbank Project, habitat loss effects on breeding birds were screened out during the FEIS (Golder 2016)		

(a) Based on 2021 Wildlife Summary Report (Golder 2022)
(b) Based on 2024 footprint and Kivalliq Ecosystem Land Classification
(c) Based on 2024 permitted area and Kivalliq Ecosystem Land Classification

Habitat suitability rankings are summarized in Table 5-3. Further description of these rankings is provided in Dougan & Associates (2015).

Table 5-3: Habitat Suitability Rankings for VECs.

ELC Habitat	Caribou Growing	Caribou Winter	Muskox Growing	Muskox Winter	Waterbirds	Breeding Birds
Water	-	Low	-	Low	High	Low
Sand	Medium	Low	Low	Low	Medium	Medium
Boulder/Gravel	Medium	Low	Low	Low	Medium	Medium
Wet Graminoid	High	Medium	High	High	High	High
Graminoid Tundra	High	Medium	High	High	High	High
Graminoid/Shrub Tundra	High	Medium	High	High	Medium	High
Shrub Tundra	Medium	Low	Medium	Medium	Low	High
Shrub/Heath Tundra	Medium	Medium	Medium	Medium	Low	High
Heath Tundra	Medium	High	Medium	Medium	Low	High
Heath Upland	Medium	High	Medium	Medium	Low	High
Heath Upland/Rock Complex	Medium	High	Low	Low	Low	Medium
Lichen Tundra	Low	Medium	Low	Low	Low	Medium
Lichen/Rock Complex	Medium	High	Medium	Medium	Low	Medium

5.3 Duration

The total area of habitat disturbance associated with Mine site and ancillary facility construction was mapped following significant construction completion (2010) and was to be mapped annually during the operation phase as detailed in the TEMP (Agnico Eagle 2019). At the end of 2010, a detailed ELC habitat loss analysis found that habitat losses to date were substantially lower than predicted and that no habitat loss thresholds for VECs were exceeded. Given this outcome, another detailed ELC habitat loss analysis was not provided until the 2012 report, which had similar conclusions as those in 2010. The 2014 habitat analysis determined that habitat losses were still below predicted losses but that some of the thresholds were being reached. A partial analysis was conducted in 2017 while a full analysis using a revised approach was completed in 2018, 2021, and 2024.

The current habitat mapping monitoring program is intended to be completed every three years post-construction or if changes are greater than 25% of the overall Mine site footprint from the previous year evaluation. This frequency may be reduced during the operation phase if the amount of new disturbance and reclamation areas is relatively unchanged. Following decommissioning, vegetation mapping will be conducted in the first two years post-closure and every three years thereafter until Year 11 post-closure to verify that thresholds have been met.

5.4 Methods

Monitoring of habitat loss occurs at three primary locations: Meadowbank Mine (includes Vault Pit and Haul Road), AWAR (including quarry sites), and Whale Tail Mine and Haul Road (includes borrow/quarries sites and access roads). For Meadowbank and the AWAR, ELC unit losses were calculated using two different ELC layers, including the original spatial layer from the 2005 EIS (Cumberland 2005) and the newer KELC (Campbell et al. 2012). The KELC layer includes categories more appropriate for land classification in the region, however, the layer was created using imagery from after Meadowbank and AWAR construction and therefor classifies some Project areas as disturbed rather than as the pre-disturbance land classification categories. Therefore, both layers were used to estimate habitat losses for Meadowbank and the AWAR. The Whale Tail Mine and WTHR were constructed after the creation of the KELC layer and therefore was the only data source needed to summarize habitat loss units for the Whale Tail and WTHR.

Project footprints were updated based on 2024 survey data. Calculated losses were then subtracted from the permitted lease areas to quantify disturbance area within the lease area boundaries. For the Meadowbank Mine and AWAR locations, thresholds are disturbances of 5% above permitted areas of 1,531 and 455 ha, respectively. For the Whale Tail and Haul Road location, threshold is disturbance of 5% above a permitted area of 1,584 ha.

5.5 Historical Results

5.5.1 Meadowbank Mine Site

In 2014, construction of the Main site construction was almost complete, including most of the infrastructure for the Vault Pit area, although much of the pit and waste rock storage area had not yet been disturbed. ELC results for the Mine site footprint, based on as-built drawings from 2014, were compared to predicted ELC unit losses from the 2005 FEIS, plus approved extensions. Measured habitat loss for the Mine site in 2014 was calculated to be 775.7 ha, which was 91.1 ha (10.5%) less than the predicted total habitat loss of 866.8 ha for the Mine site. Differences between predicted and actual habitat losses were greatest in heath tundra, birch and riparian shrub, and lichen ELC units, all of which are high suitability habitat for ungulates during the winter season. Although no thresholds (>5% to 10% above predicted losses) for the loss of high suitability habitat were exceeded for any VECs, threshold levels for the Mine site were almost reached in 2014. Consequently, commitments were made to remove the material stored in the NPAG extension area (which was approved by Nunavut Water Board [NWB]) and use it for capping of the North Cell Tailings Storage Facility during the closure/reclamation phase of the Mine.

In 2017, the Mine development footprint had changed substantially since the 2014 analysis. The Vault Pit was fully operational and had expanded into the Phaser Lake area. Although the Phaser Lake extension was completed with approval from the NIRB and the NWB, the size of the extension area was not available for habitat calculations in the 2017 report. Measured habitat loss for the Mine site in 2017 was calculated to be 1,021 ha, which was 154 ha (17.8%) more than the predicted total habitat loss of 867 ha for the Mine site. The difference between predicted and actual habitat losses was primarily attributable to the final extent of the Vault waste dump, the Phaser Lake extension of the Vault Pit area (i.e., these were not included in the 867-ha calculation), and the as-built layout of the Non-potentially Acid Generating (NPAG) expansion of the Portage Waste Rock Facility. Differences between predicted and actual habitat losses were greatest for the sedge, and birch and riparian shrub ELC units, both of which are high suitability habitat for ungulates during the winter season. Greater than 10% differences between predicted and actual habitat losses were also observed in heath tundra, lichen, lichen-rock, and rock and boulder ELC units. Additionally, losses of high suitability habitat exceeded established thresholds for ungulates (growing and winter season), small mammals, and other breeding birds.

For the 2018 habitat analysis, the approach was revised to compare habitat losses to total area within Agnico Eagle's permitted areas, which also encompasses future approved work. The most recent comprehensive assessment was completed in 2021. Using the original ELC, overall measured habitat losses (i.e., 1,129 ha) were 26% less than the habitat available within permitted areas (i.e., 1,532 ha) of the Meadowlark Mine site; therefore, thresholds were not surpassed. High suitability habitat losses for ungulates, small mammals, waterbirds, and other breeding birds were all below available high suitability habitats within permitted areas, also not surpassing any thresholds.

A full assessment was not triggered in 2022 or 2023. This comprehensive assessment discusses the overall measured habitat loss for 2024 in section 5.7.

5.5.2 AWAR

The 2010 ELC results for the AWAR were compared to ELC unit losses predicted in the 2005 EIS report. Construction of the AWAR and associated quarry sites required 41.7% (117 ha) of the area that was predicted in the 2005 FEIS (281 ha) and for each ELC unit, actual habitat losses were less than predicted. ELC habitat loss values for the AWAR in 2010 were compared to predicted high suitability habitat losses for ungulates (growing and winter season), waterbirds, other breeding birds, and small mammals. In all cases, the measured high suitability habitat losses were less than predicted losses and thresholds were not exceeded (i.e., >5 to 10% above predicted losses). The footprints of the AWAR and associated quarry sites were last assessed in 2021, where it has since increased in size from 180 ha to 184 ha in 2024.

5.5.3 Whale Tail Mine and WTHR

The Whale Tail Mine was last assessed in 2021 (Golder 2022). The area of the proposed footprint from 2018 was assessed as 504 ha, and the area of the 2021 footprint of the Whale Tail Mine was assessed as 571 ha. The Whale Tail Lake, borrow areas, and WTHR present in the proposed 2018 footprint were excluded from comparison with the 2021 footprint. Change in footprint for the Whale Tail mine (13.3%) in 2021 was assessed as less than 25% since 2018. In 2021, the area of both the Whale Tail Mine and WTHR footprints was 775 ha. The Whale Tail permitted area increased by 2.1% from 1473 ha in 2018 to 1504 ha in 2021.

5.6 Results

New development between 2021 and 2024 occurred at the Whale Tail Mine, quarries along the WTHR, and quarries along the AWAR. A 9.0% change (69 ha) in footprint at the Whale Tail site and Whale Tail haul road occurred between the 2021 assessment and the 2024 assessment. There were no changes to the footprint or the permitted area for the Meadowbank Mine Site from 2021 to 2024. For the AWAR, an increase in size of 2% (4.5 ha) was observed for the lease boundaries between 2021 and 2024. The changes in footprint since the previous assessment were less than 25%. Therefore, a comprehensive habitat loss assessment was not required prior to the 2024 scheduled assessment.

5.6.1 AWAR

In 2010 the footprint of the AWAR and associated quarry sites was reported as 117 ha in size (Agnico Eagle 2011) but increased in size to 180 ha between 2010 and 2023. Between 2021 and 2024, the AWAR and associated quarry sites had increased by 4.5 ha to a total of 184 ha.

Due to updates to the ELC units that occurred in 2015 (Dougan & Associates 2015), some of the areas now classified as “Disturbance” include areas disturbed through the construction of the AWAR between its initial construction and its current footprint, meaning that pre-disturbance data are not available for of some areas when using the KELC dataset. Additionally, the KELC units include different categories for ecosystem classification. This change in ELC unit is evident between the different ELC units used in Table 5-4 and Table 5-5. The 145.6 ha of “Disturbance” in Calculated ELC Unit Losses column in Table 5-5 is composed of the total 117.3 ha of Calculated ELC Unit Losses from Table 5-4, with an additional 28.3 ha of ELC unit losses from an unknown ELC unit between 2010 and 2024. The unit discrepancy may be due to differences in land classification rules or minimum mapping unit (i.e., coarseness).

Table 5-4: AWAR Unit Totals from 2010 Wildlife Monitoring Summary (Agnico Eagle 2011)

ELC Unit	Permitted Areas (EIS 2010) (ha)	Calculated ELC Unit Losses (2010) (ha)	Difference (ha)
Water	0.61	0.03	0.58
Sedge	21.57	12.86	8.71
Birch and Riparian Shrub	41.73	17.25	24.48
Heath Tundra	105.69	38.18	67.51
Lichen	57.80	24.35	33.45
Lichen-Rock	14.43	6.12	8.31
Ridge Crest / Esker / Avens	8.82	4.22	4.6
Rock and Boulder	24.82	12.65	12.17
Disturbed	2.88	0.72	2.16
Residual	2.96	0.93	2.03
Total	**281.31**	**117.29**	**164.02**

Table 5-5: AWAR Footprint ELC Unit Loss 2024

ELC Unit	Permitted Areas (ha)[(a)]	Calculated ELC Unit Losses (ha)	Difference (ha)
Boulder/Gravel	3.23	0.79	2.44
Cloud/Shadow	1.47	0.00	1.47
Disturbance	359.88	145.60	214.27
Graminoid Tundra	7.85	2.24	5.61
Graminoid/Shrub Tundra	2.74	1.07	1.67
Heath Tundra	25.03	12.51	12.52
Heath Upland	28.69	12.41	16.28
Heath Upland/Rock Complex	11.61	4.32	7.30
Lichen Tundra	2.20	0.92	1.28
Lichen/Rock Complex	6.88	1.58	5.30
Sand	0.41	0.09	0.31
Shrub Tundra	1.61	0.69	0.92
Shrub/Heath Tundra	2.51	0.86	1.65
Water	0.29	0.36	-0.07
Wet Graminoid	1.45	0.28	1.17
Total	**455.85**	**183.72**	**272.12**

a) Predicted loss in 2024 is based on permitted area and approved extensions and not EIS predicted areas.

Change in high suitability habitats compared to predicted losses is summarized in Table 5-6. The Permitted Areas and 2024 Losses column in Table 5-6 were calculated by combining the high suitability habitat from the 2005 EIS (Cumberland 2005) using the original ELC and the 2024 data using the KELC, assuming that some of the previous ELC units make up habitat loss that is now classified as disturbance in the KELC as seen in Table 5-5.

Table 5-6: AWAR Predicted and Actual High Suitability Habitat Losses

Habitat	Permitted Area (ha)[(a)]	2024 Loss (ha)	% of Predicted Loss	Threshold (above predicted losses)
Terrestrial Habitat	455.9	183.7	40%	5%
Ungulate Growing Season	75.3	33.71	45%	10%
Ungulate Winter Season	271.0	107.28	40%	10%
Waterbirds	31.8	15.77	50%	10%
Breeding Birds	217.3	85.5	39%	10%

5.6.2 Meadowbank Mine Site

The lease area at the Meadowbank Mine Site including the Vault Site did not change between 2021 to 2024. Table 5-7 is taken from 2021 Wildlife Monitoring Summary, which uses the original ELC, and Table 5-8 shows the habitat summary of ELC unit losses from the permitted area using the KELC. While it appears that the footprint of the Meadowbank Mine Site decreased between 2021 (Table 5-7) and 2024 (Table 5-8), this is because of the different ELC classifications used.

Table 5-7: Meadowbank Mine Site Unit Totals from the 2021 Wildlife Monitoring Summary (Golder 2022)

ELC Unit	Permitted Areas (ha)	Calculated ELC Unit Losses (ha)	Difference (ha)
Birch and Riparian Shrub	202.91	142.43	60.49
Heath Tundra	145.51	116.65	28.86
Lichen	175.07	119.9	56.07
Lichen-Rock	86.45	43.67	42.78
Ridge Crest / Esker / Avens	0.19	0.18	0.01
Rock and Boulder	185.13	113.15	71.98
Sedge	328.03	229.05	98.98
Water	408.33	365.13	43.19
Total Area	**1,531.63**	**1,130.16**	**402.37**

Table 5-8: Meadowbank and Vault Footprint ELC Unit Losses for 2024 using KELC

ELC Unit	Permitted Areas (ha)[a]	Calculated ELC Unit Losses (ha)	Difference (ha)
Boulder/Gravel	48.73	30.47	18.27
Disturbance	566.63	545.59	21.04
Graminoid Tundra	11.60	7.79	3.81
Graminoid/Shrub Tundra	17.03	9.36	7.67
Heath Tundra	189.71	121.25	68.47
Heath Upland	300.03	168.73	131.30
Heath Upland/Rock Complex	15.66	5.26	10.40
Lichen Tundra	57.00	25.74	31.26
Lichen/Rock Complex	124.86	50.91	73.95
Sand	2.27	0.68	1.59
Shrub Tundra	0.48	0.67	-0.19
Shrub/Heath Tundra	8.72	3.15	5.57
Water	183.12	140.23	42.88
Wet Graminoid	4.96	2.90	2.06
Total	**1,530.82**	**1,112.72**	**418.09**

a) Predicted loss in 2024 is based on permitted area and approved extensions and not EIS predicted areas.

The estimated change in high suitability habitats compared to predicted losses is summarized in Table 5-9 and Table 5-10. Due to the KELC not containing the original land cover data since the 2005 EIS, the Table presents data from 2021 using the original ELC classification.

Table 5-9: Meadowbank Mine Site Predicted and Actual High Suitability Habitat Losses from the 2021 Summary (Golder 2022)

Habitat	Permitted Area (ha)[a]	2024 Loss (ha)	% of Predicted Loss	Threshold (above predicted losses)
Terrestrial Habitat	1,532	1,130	74%	5%
Ungulate Growing Season	531	372	70%	10%
Ungulate Winter Season	407	280	69%	10%
Waterbirds	417	274	66%	10%
Breeding Birds	736	594	81%	10%

(a) Predicted loss in 2024 is based on permitted area and approved extensions and not EIS predicted areas.

The below table was summarized using the KELC in 2024. The differences in the Ungulate Growing Season, Ungulate Winter Season, Waterbirds, and Breeding birds, between Table 5-9 and Table 5-10 are due to differences in land classification between the original ELC classification used in the 2005 EIS and the KELC, with the KELC using more recent imagery that does not capture the original landcover used in the 2005 EIS.

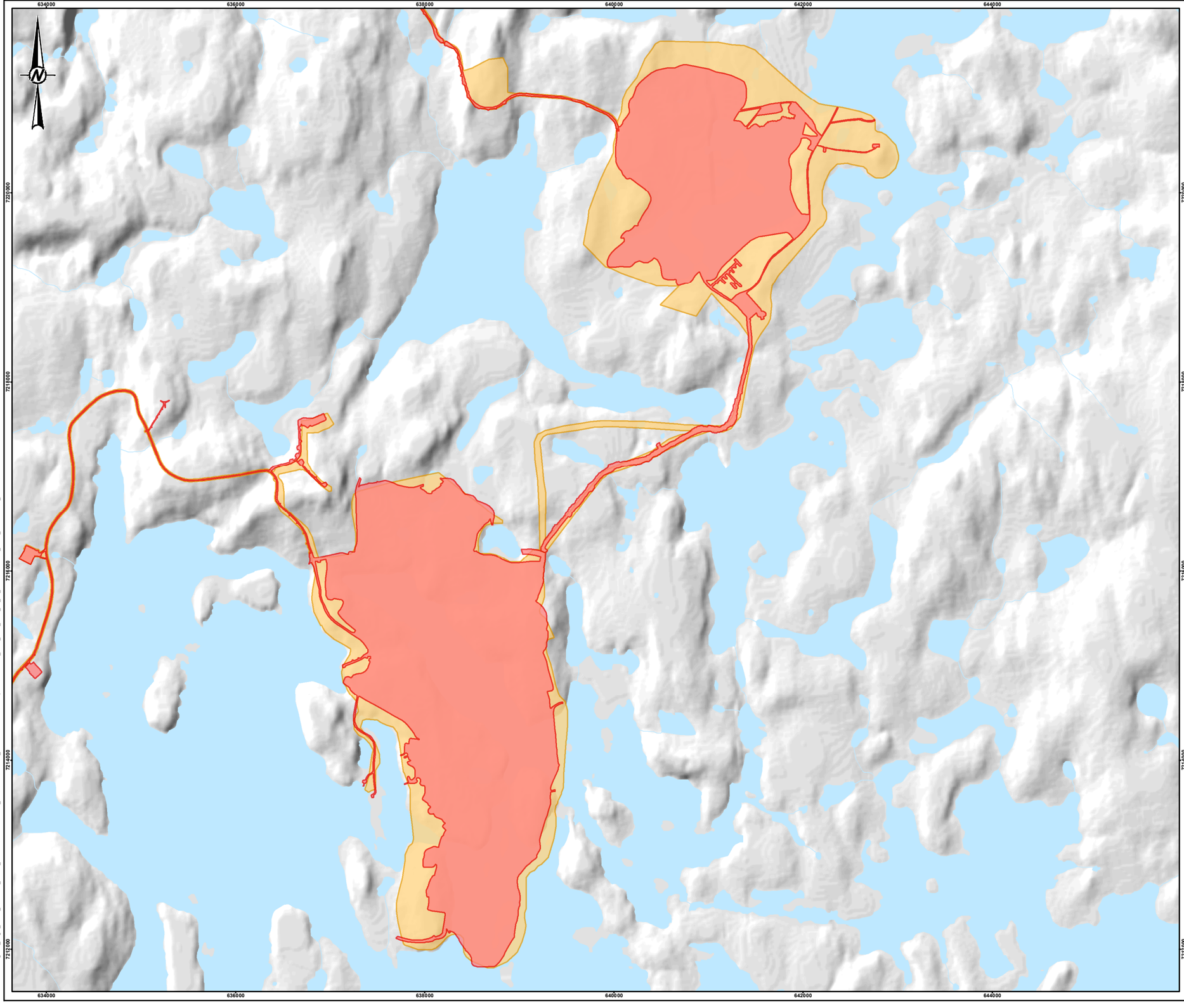
Table 5-10: Meadowbank Mine Site Predicted and Actual High Suitability Habitat Losses for 2024 using KELC

Habitat	Permitted Area (ha)[(a)]	2024 Loss (ha)	% of Predicted Loss	Threshold (above predicted losses)
Terrestrial Habitat	1,530.82	1,112.72	73%	5%
Ungulate Growing Season	33.59	20.05	60%	10%
Ungulate Winter Season	663.86	366.20	55%	10%
Waterbirds	199.68	150.92	76%	10%
Breeding Birds	532.54	313.17	59%	10%

(a) Predicted loss in 2024 is based on permitted area and approved extensions and not EIS predicted areas.

634000 636000 638000 640000 642000 644000

7220000 7218000 7216000 7214000 7212000



LEGEND

- AREA DISTURBED (2024)
- PERMITTED LEASE AREA
- WATERCOURSE
- WATERBODY



0 800 1,600

1:40,000 METRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

MEADOWBANK MINE FOOTPRINT (2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	5-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\CA0039984_7604\40\00\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_05_01_MEADOWBANK_MINE_FOOTPRINT_2024.mxd PRINTED ON: 2025-03-19 AT: 11:49:55 AM

5.6.3 Whale Tail Mine and WTHR

Change in ELC units for the Whale Tail Mine and Whale Tail Haul Road is summarized in Table 5-11 and Figure 5-2. Since the last comprehensive report in 2021, the size of the Whale Tail Mine and Haul Road footprint has increased from 775 to 844 ha, marking an increase of 69 ha or 9.0% (Golder 2022). The highest area of ELC losses are within the lichen/rock complex ELC units followed by the heath upland and heath tundra ELC units representing 271 ha, 169 ha and 145 ha of habitat losses, respectively.

Table 5-11: Whale Tail Mine and Whale Tail Haul Road Footprint ELC Unit Loss

ELC Unit	Predicted Losses from Whale Tail Expansion 2018 FEIS (ha)	Permitted Areas (ha)	Calculated ELC Unit Losses (ha)	Difference (ha)
Boulder/Gravel	94	123.89	57.15	66.73
Graminoid Tundra	21	32.75	13.83	20.92
Graminoid/Shrub Tundra	6	15.44	4.33	11.11
Heath Tundra	146	219.12	144.53	74.59
Heath Upland	175	322.00	169.47	152.53
Heath Upland/Rock Complex	7	14.22	6.78	7.43
Lichen Tundra	49	101.48	51.44	50.04
Lichen/Rock Complex	285	502.96	271.01	231.95
Sand	11	17.43	6.29	11.14
Shrub Tundra	9	11.38	7.68	3.70
Shrub/Heath Tundra	13	23.17	11.46	11.71
Water	360	191.11	96.09	95.02
Wet Graminoid	10	7.38	4.29	3.10
Total Area	**1,186**	**1,584.33**	**844.35**	**739.98**

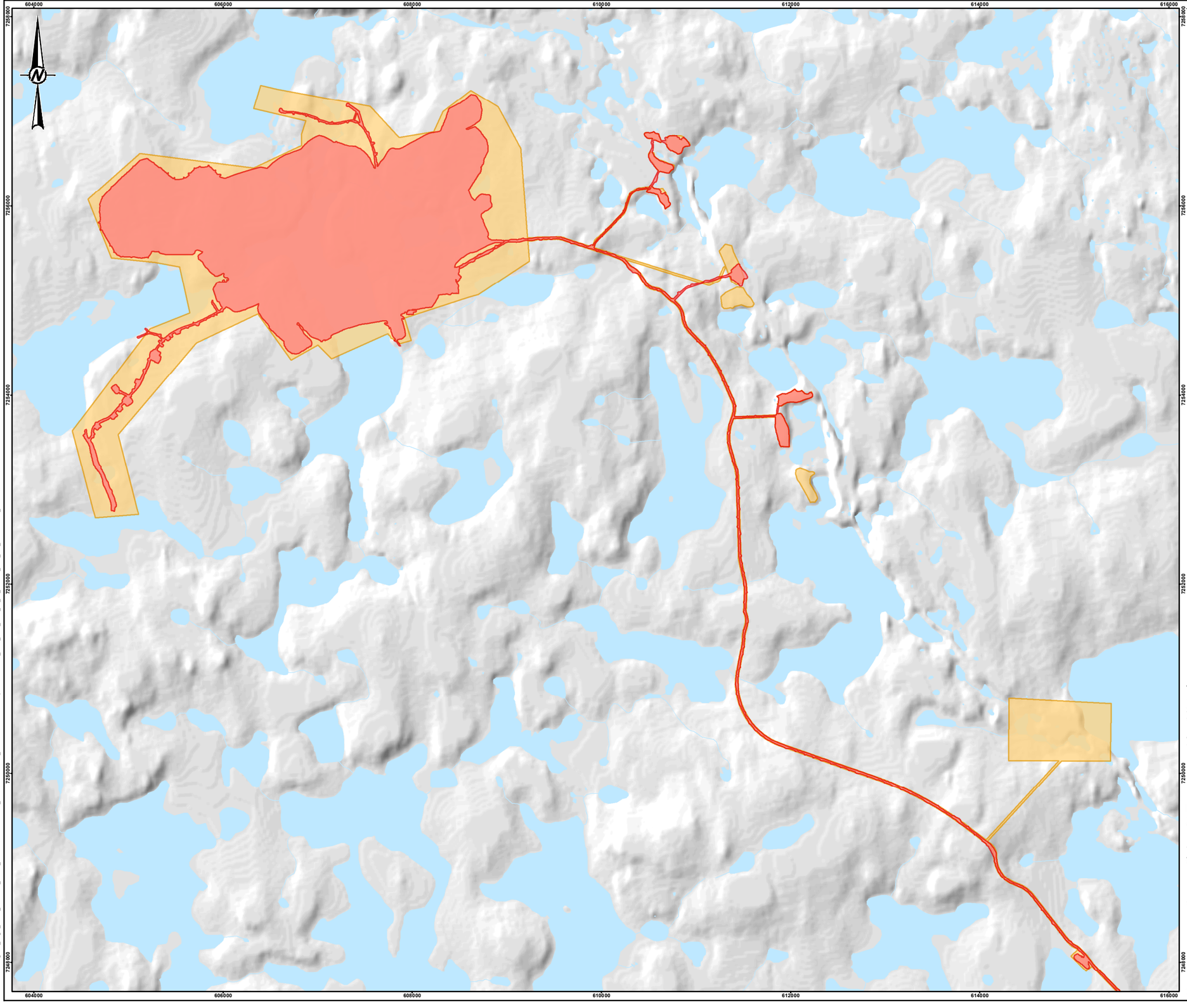
Change in high suitability habitats compared to predicted losses is summarized in Table 5-12.

Table 5-12: Whale Tail Mine and Haul Road Predicted and Actual High Suitability Habitat Losses

Habitat	Permitted Area (ha)[a]	2024 Loss (ha)	% of Predicted Loss	Threshold (above predicted losses)
Terrestrial Habitat	1,584.33	844.35	53%	5%
Ungulate Growing Season	57.58	22.45	39%	10%
Ungulate Winter Season	1,115.87	614.24	55%	10%
Waterbirds	233.25	114.21	49%	10%
Breeding Birds	633.25	355.59	56%	10%

604000 606000 608000 610000 612000 614000 616000

7258000 7256000 7254000 7252000 7250000 7248000



LEGEND

- AREA DISTURBED (2024)
- PERMITTED LEASE AREA
- WATERCOURSE
- WATERBODY

KEY MAP



0 800 1,600

1:40,000 METRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

WHALE TAIL PIT AND HAUL ROAD FOOTPRINT (2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	5-2

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9_PROJECTS\CA0039984_7604-4000\4004\02_PRODUCT\GNM\MXD\Report\CA0039984_7604_4000_4004_05_02_WHALE_TAIL_PIT_FOOTPRINT_2024.mxd PRINTED ON: 2025-03-19 AT 11:50:56 AM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

5.7 Accuracy of Impact Predictions

The 2024 habitat loss data were compared to permitted areas (i.e., rather than EIA predicted areas and extensions) to evaluate adherence to the impact predictions and the provision of adaptive management, as either a necessary or proactive measure. Actual habitat loss as result of mine site, AWAR, and WTHR construction to date is less than habitat available within permitted areas (Table 5-13).

Table 5-13: Accuracy of Impact Predictions – Habitat Loss

Measurable Parameter	Threshold (Compared to Permitted Areas)	Threshold Exceeded (2024)	Adaptive Management Implemented	Status
Habitat Loss	Terrestrial Habitat Meadowbank = 1,531 ha AWAR = 455 ha Whale Tail = 1,584 ha Threshold is >5% habitat loss of permitted area	No	None required	Ground Surveys Mapping and GIS analyses – ELC habitat mapping
	Ungulates Meadowbank Mine Site Growing = 531 ha Winter = 407 ha AWAR Growing = 34 ha Winter = 107 ha Whale Tail Growing = 58 ha Winter = 1,116 ha	No	None Required	
	Small Mammals Waterbirds Breeding Birds	Given the minimal effects associated with the Meadowbank project, habitat loss effects were screened out during the EA (Golder 2016)		
	Following mine closure and reclamation activities (except for tailings, waste rock facilities and exposed pit slopes) will see revegetation rates of >20% (year 2 post-closure), >40% (year 5), >60% (year 8) and >80% (year 11)	Not yet applicable		

AWAR = All-Weather Access Road, EA = Environmental Assessment, ELC = Ecological Land Classification, GIS = Geographic Information System.

5.8 Management Recommendations

Measured change in footprint for the Meadowbank Mine and Vault sites, the AWAR, the Whale Tail Mine and WTHR was assessed as less than 25% of predicted values in 2021, the last comprehensive assessment, and 2023, the last annual assessment. Therefore, the next comprehensive habitat analysis will be completed in 2027 as it will be 3 years following this report.

6.0 CARIBOU SATELLITE-COLLARING PROGRAM

6.1 Overview

The caribou satellite-collaring program continued in 2024 and includes data collected within the Project. Collar deployment for this program is completed by the Government of Nunavut in collaboration with hunters and Elders. The program allows Agnico Eagle to assessing the spatial relationship between collared caribou and the Project RSA.

6.2 Objectives

The satellite-collaring program was developed to provide information on the distribution of caribou occurring within the Project RSA and contribute data to ongoing satellite-collaring programs for the Ahiak, Beverly, Lorillard, Qamanirjuaq, and Wager Bay herds, as well as individuals not yet assigned to a herd and marked as Northeast Mainland (NEM) in the data. The satellite-collaring program, along with regional data, are important monitoring and management tools that provide a regional perspective on caribou activity near Mine operations. Another key objective of the program is to provide timely information for the caribou management and monitoring strategy at the Meadowbank and Whale Tail sites (i.e., Decision Tree approach; see 2019 TEMP [Agnico Eagle 2019]).

To better understand caribou movement trajectories across the WTHR and AWAR, a descriptive analysis using the most recent telemetry data was performed using data current to 31 December 2024. Seasonal movement maps were produced to visualize the spatial relationships between collared caribou and the Project RSA in 2024.

6.3 Duration and Methods

The satellite-collaring program was initially designed to continue for five consecutive years in accordance with the original TEMP (Cumberland 2006). Caribou in the Baker Lake area were first collared in May 2008, and the program continued for more than a decade.

Caribou collaring methods and deployment are administered by the GN DoE. Caribou are carefully netted by the contracted satellite-collaring crew via helicopter and fitted with either an Advanced Research and Global Observation Satellite (ARGOS), GPS Type IV or Iridium satellite-collar.

Deployed collar data were included in a population distribution analysis completed for the GN (Nagy et al. 2011). The clustering and movements of each collared caribou were examined and assigned to the sub-population (i.e., Ahiak, Beverly, Lorillard, Qamanirjuaq, and Wager Bay herds) that best fits the animal’s movement characteristics.

6.4 Historical Results

Collar deployment around Baker Lake with the assistance of Agnico Eagle began in 2008. The number of collared caribou continues to grow yearly. The number of collared caribou that interact with the Project fluctuates yearly but remains relatively low (Table 6-1).

Table 6-1: Total Number of Collared Caribou and GPS Fixes across Years.

Year	Total Collars	Total Fixes	Collars in RSA	Fixes in RSA	Collars in RSA (%)	Fixes in RSA (%)
2008	82	9,304	0	0	0	0
2009	57	7,659	0	0	0	0
2010	32	9,066	6	72	18.75	0.79
2011	59	13,000	6	31	10.17	0.24
2012	50	14,611	5	66	10.00	0.45
2013	74	23,124	4	30	5.41	0.13
2014	47	33,787	3	125	6.38	0.37
2015	87	63,675	6	236	6.90	0.37
2016	102	134,484	12	930	11.76	0.69
2017	132	176,480	12	449	9.09	0.25
2018	136	197,294	29	2,570	21.32	1.30
2019	145	216,577	14	729	9.66	0.34
2020	101	154,714	11	612	10.89	0.40
2021	86	119,282	5	283	5.81	0.24
2022	137	165,651	20	746	14.60	0.45
2023	233	333,276	20	1,354	8.58	0.41
2024	196	247,684	13	1019	6.63	0.41

6.4.1 2024 Caribou Movement Patterns

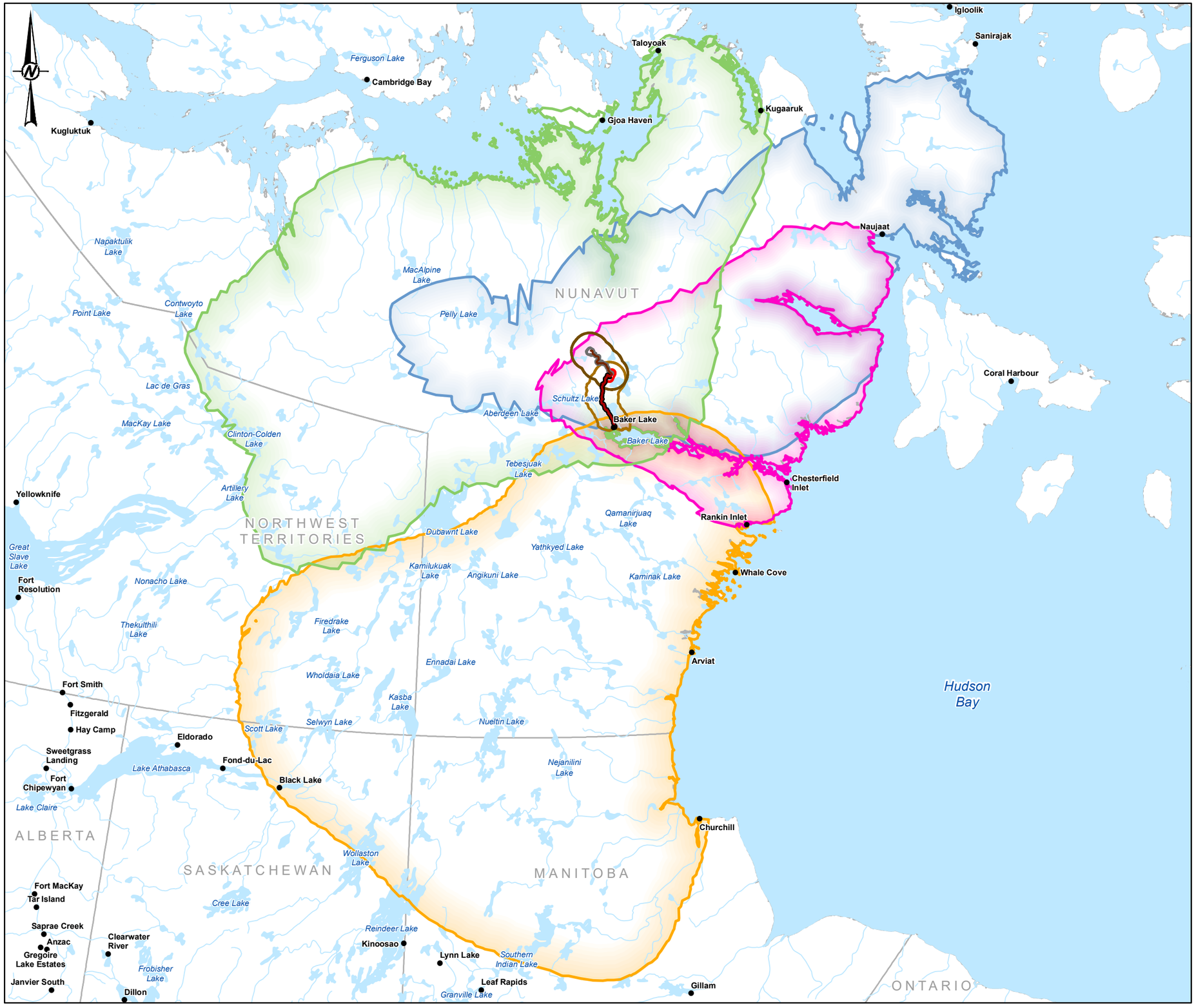
In 2024, thirteen individuals from 3 different herds (Ahiak, Lorillard, and Wager Bay) had collar fixes within the Project RSA. Only 2 collared caribou interacted with the RSA during spring and summer. The earliest and latest dates of GPS fixes in the RSA for each season can be found in Table 6-2.

Table 6-2: Number of Collared Caribou by Season that Interacted with the Project RSA with Arrival and Exit Dates.

Season	Number of Collars	Earliest Arrival	Latest Exit
Spring (01 Apr to 25 May)	2	2024-04-01	2024-04-26
Summer (26 May to 21 Sep)	2	2024-08-28	2024-09-21
Fall (22 Sep to 15 Dec)	9	2024-09-28	2024-12-15
Winter (16 Dec to 31 Mar)	7	2024-12-16	2024-03-31

Migration pattern maps were produced for the Ahiak, Lorillard, Qamanirjuaq, and Wager Bay caribou ranges (Figure 6-1). Caribou ranges provided on maps were included for reference, but the Ahiak range in this case is used to represent areas used by both Ahiak and Beverly herds. Collared caribou paths depicted on figures could be from caribou from any one of these herds and may also include caribou marked as Northeast Mailand (NEM) or individuals not yet classified to herd.

During spring migration 2024, caribou migration movements were generally in a northeastern direction over time (Figure 6-2). Caribou interacting with the Project RSA generally started their migrations within the Ahiak and Lorillard herd ranges and ended spring migration within the Ahiak, Lorillard, or Wager Bay ranges. During summer 2024, caribou directional movements followed less of a consistent pattern (Figure 6-3). Caribou were more dispersed and used large areas during summer, including coastal areas, which is consistent with expected patterns during the insect avoidance seasons. Caribou within the Ahiak and Lorillard range were most likely to interact with Project during summer at the north and south ends (Figure 6-2). During fall migration 2024, caribou directional movements were less clear compared to spring, but generally followed a pattern of dispersed southwest movements (Figure 6-4). Caribou winter movements in 2024 were more condensed compared to other seasons (Figure 6-5). Caribou near or within the Project RSA during winter occurred mainly within the Lorillard range. This pattern has also been observed during baseline (Golder 2020a).



LEGEND

- POPULATED PLACE
- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA) *AWAR LOCAL STUDY AREA (LSA)*
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY
- PROVINCIAL/TERRITORIAL BOUNDARY

ANNUAL RANGE

- AHIAK
- LORILLARD
- QAMANIRJUAQ
- WAGER BAY

0 120 240

1:6,000,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. BASE DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES. CANADA. ALL RIGHTS RESERVED.
3. CARIBOU DATA OBTAINED FROM DEPARTMENT OF ENVIRONMENT (GOVERNMENT OF NUNAVUT), GOVERNMENT OF NORTHWEST TERRITORIES.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

CARIBOU ANNUAL RANGES

CONSULTANT

wsp

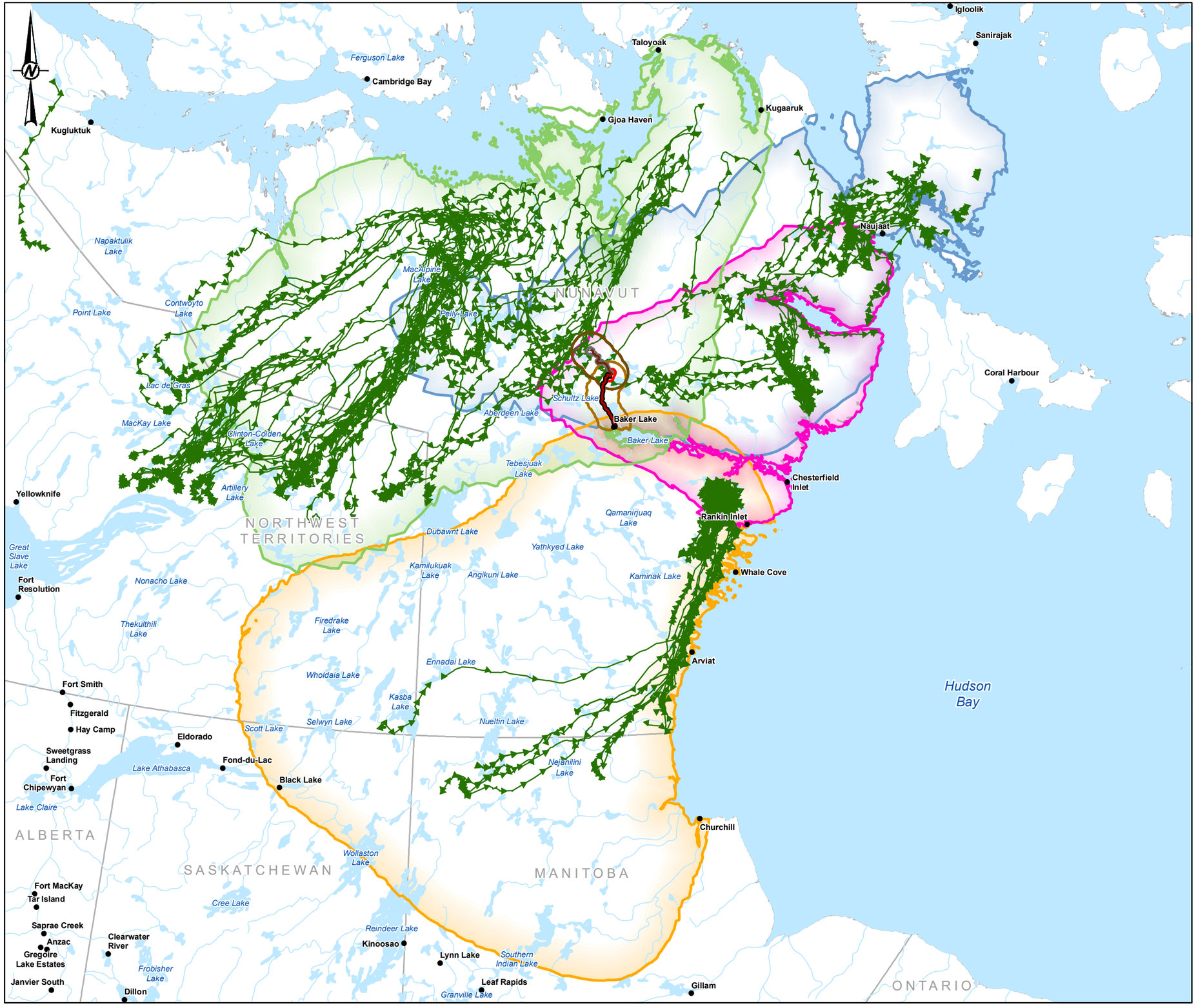
YYYY-MM-DD	2025-03-19
DESIGNED	MS
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	PHASE	REV.	FIGURE
CA0039984.7604	4000/4004	0	6-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9.PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_06_01_CARIBOU_ANNUAL_RANGES.mxd PRINTED ON: 2025-03-19 AT: 11:53:05 AM



LEGEND

- POPULATED PLACE
- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA) *AWAR LOCAL STUDY AREA (LSA)*
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY
- PROVINCIAL/TERRITORIAL BOUNDARY

2024 SATELLITE-COLLARED CARIBOU BY SEASON

- SPRING

ANNUAL RANGE

- AHIAK
- LORILLARD
- QAMANIRJUAQ
- WAGER BAY

0 120 240

1:6,000,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. BASE DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES. CANADA. ALL RIGHTS RESERVED.
3. CARIBOU DATA OBTAINED FROM DEPARTMENT OF ENVIRONMENT (GOVERNMENT OF NUNAVUT), GOVERNMENT OF NORTHWEST TERRITORIES.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

COLLARED CARIBOU MOVEMENTS DURING SPRING (APRIL 1 TO MAY 25), 2024

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	MS
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

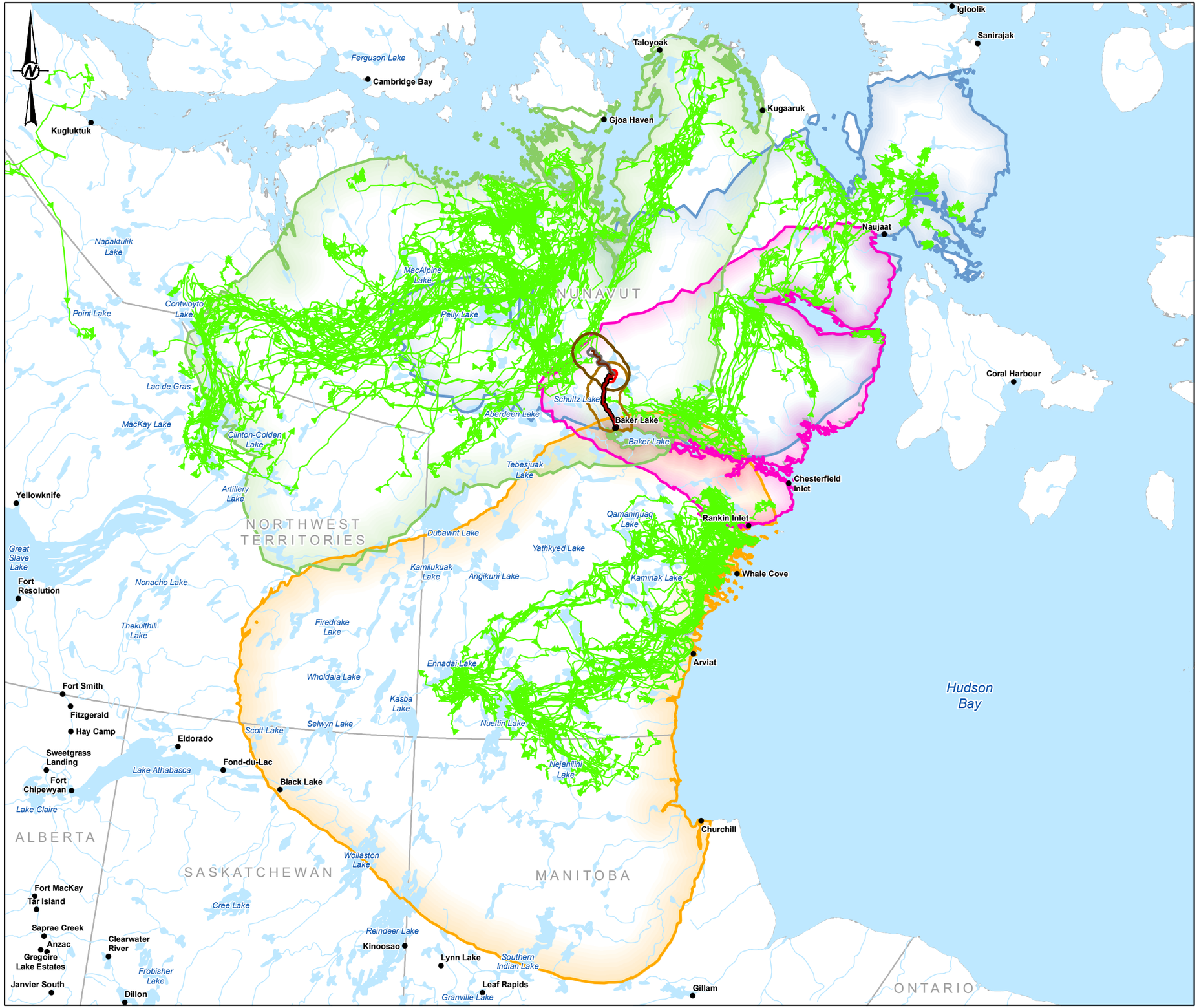
PROJECT NO.	PHASE	REV.	FIGURE
CA0039984.7604	4000/4004	0	6-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

0

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\CA0039984_7604\4000\404\402_PRODUCT\MXD\Report\CA0039984_7604_4000_4004_06_02_COLLARED_CARIBOU_MOVEMENTS_SPRING_2024.mxd PRINTED ON: 2025-03-19 AT: 1:36:33 PM



LEGEND

- POPULATED PLACE
- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA) *AWAR LOCAL STUDY AREA (LSA)*
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY
- PROVINCIAL/TERRITORIAL BOUNDARY

2024 SATELLITE-COLLARED CARIBOU BY SEASON

- SUMMER

ANNUAL RANGE

- AHIAK
- LORILLARD
- QAMANIRJUAQ
- WAGER BAY

0 120 240

1:6,000,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. BASE DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES. CANADA. ALL RIGHTS RESERVED.
3. CARIBOU DATA OBTAINED FROM DEPARTMENT OF ENVIRONMENT (GOVERNMENT OF NUNAVUT), GOVERNMENT OF NORTHWEST TERRITORIES.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

COLLARED CARIBOU MOVEMENTS DURING SUMMER (MAY 26 TO SEPTEMBER 21), 2024

CONSULTANT

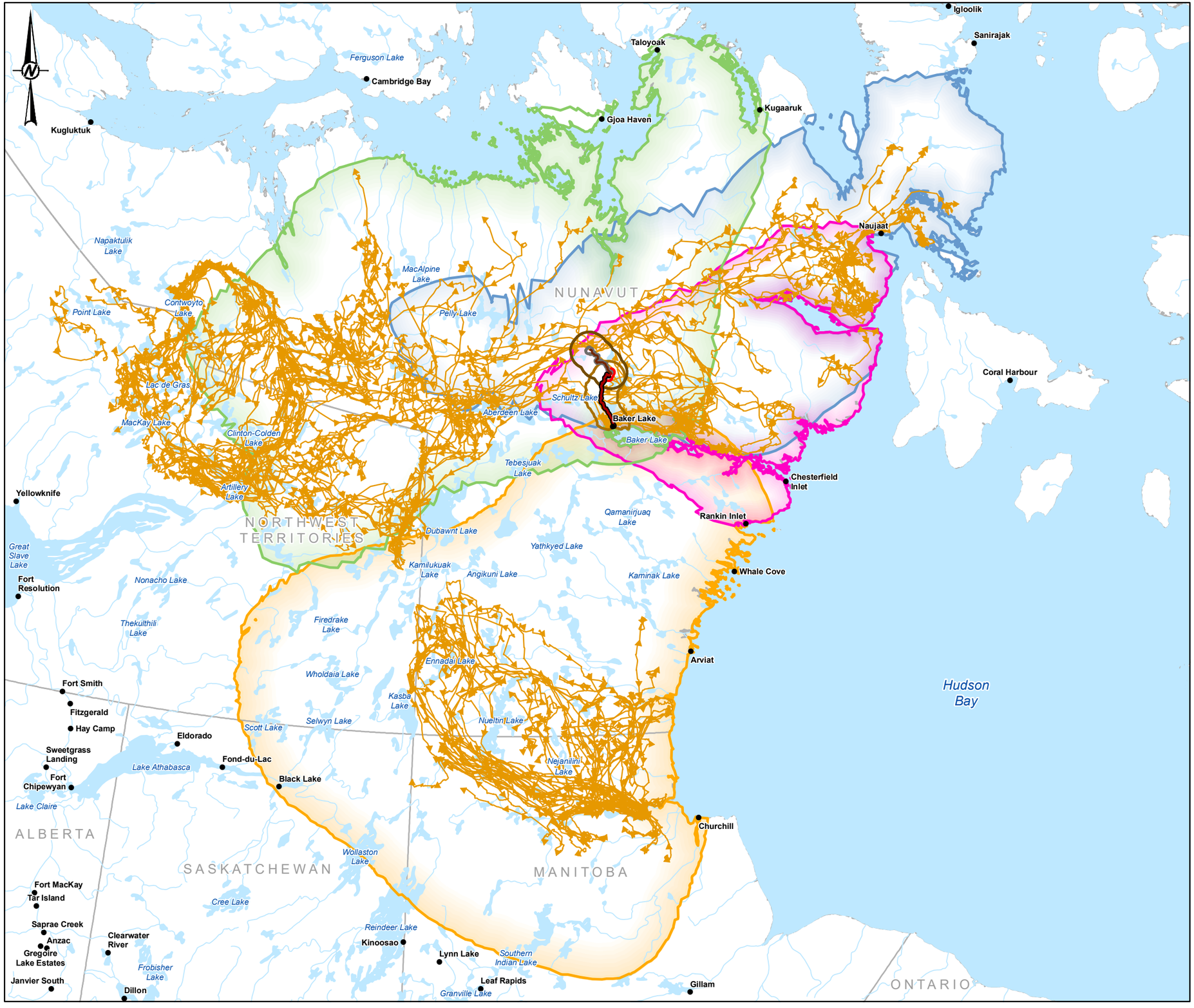
wsp

YYYY-MM-DD	2025-03-19
DESIGNED	MS
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	PHASE	REV.	FIGURE
CA0039984.7604	4000/4004	0	6-3

© THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_06_03_COLLARED_CARIBOU_MOVEMENTS_SUMMER_2024.mxd PRINTED ON: 2025-03-19 AT: 1:37:23 PM



LEGEND

- POPULATED PLACE
- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA) *AWAR LOCAL STUDY AREA (LSA)*
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY
- PROVINCIAL/TERRITORIAL BOUNDARY

2024 SATELLITE-COLLARED CARIBOU BY SEASON

- FALL

ANNUAL RANGE

- AHIAK
- LORILLARD
- QAMANIRJUAQ
- WAGER BAY

0 120 240

1:6,000,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. BASE DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES. CANADA. ALL RIGHTS RESERVED.
3. CARIBOU DATA OBTAINED FROM DEPARTMENT OF ENVIRONMENT (GOVERNMENT OF NUNAVUT), GOVERNMENT OF NORTHWEST TERRITORIES.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

COLLARED CARIBOU MOVEMENTS DURING FALL (SEPTEMBER 22 TO DECEMBER 15), 2024

CONSULTANT

wsp

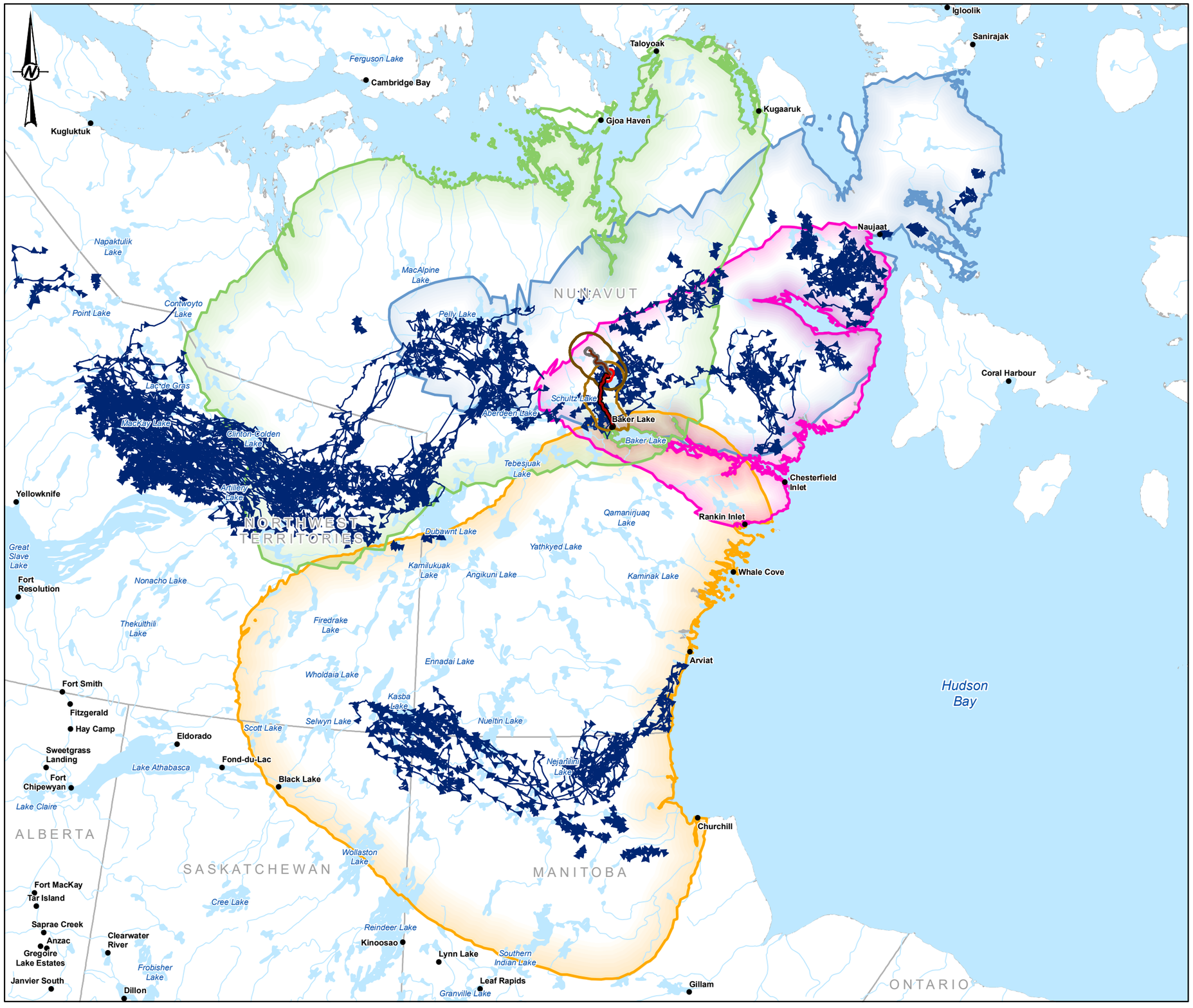
YYYY-MM-DD	2025-03-19
DESIGNED	MS
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	PHASE	REV.	FIGURE
CA0039984.7604	4000/4004	0	6-4

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_06_04_COLLARED_CARIBOU_MOVEMENTS_FALL_2024.mxd PRINTED ON: 2025-03-19 AT: 1:38:25 PM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm



LEGEND

- POPULATED PLACE
- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA) *AWAR LOCAL STUDY AREA (LSA)*
- WTHR LOCAL STUDY AREA (LSA)
- WTHR REGIONAL STUDY AREA (RSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- MEADOWBANK REGIONAL STUDY AREA (RSA)
- WATERCOURSE
- WATERBODY
- PROVINCIAL/TERRITORIAL BOUNDARY

2024 SATELLITE-COLLARED CARIBOU BY SEASON

- WINTER

ANNUAL RANGE

- AHIAK
- LORILLARD
- QAMANIRJUAQ
- WAGER BAY

0 120 240

1:6,000,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. BASE DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES. CANADA. ALL RIGHTS RESERVED.
3. CARIBOU DATA OBTAINED FROM DEPARTMENT OF ENVIRONMENT (GOVERNMENT OF NUNAVUT), GOVERNMENT OF NORTHWEST TERRITORIES.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

COLLARED CARIBOU MOVEMENTS DURING WINTER (DECEMBER 16 TO MARCH 31), 2024

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	MS
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	PHASE	REV.	FIGURE
CA0039984.7604	4000/4004	0	6-5

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_06_05_COLLARED_CARIBOU_MOVEMENTS_WINTER_2024.mxd PRINTED ON: 2025-03-19 AT 1:40:50 PM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

6.5 Accuracy of Impact Predictions

There are no specific impact predictions for caribou migration movements. Seasonal patterns of collared caribou movements vary across space and by season. Yearly and seasonal variability may be driven by ecological factors such as patterns of lichen growth, weather, and insect harassment (Gurarie et al. 2019; Joly et al. 2024).

6.6 Management Recommendations

Due to seasonal and yearly variability in movement patterns at the RSA scale, flexible and responsive mitigation measures, such as TEMP decision trees, are likely to continue to be the most effective. Ecologically relevant variables on caribou movements include snow conditions (Mallory et al. 2020), weather (Gurarie et al. 2019), and vegetation cover (Joly et al. 2024). By considering how ecological factors determine movement choices from one GPS fix to the next, it may be possible to understand what determines movement trajectories that result in interactions with the Project RSA. With the continued goal of protecting the maximum number of caribou in an effective and efficient manner, further studies that incorporate both collar data and IQ knowledge will be valuable for understanding caribou movement in relation to the Meadowbank Complex.

7.0 VIEWSHED SURVEYS

7.1 Overview

Viewshed surveys were implemented in 2020 to survey standardized and readily accessible locations along the WTHR that would maximize detection of approaching caribou because topography around the WTHR is variable. The viewshed surveys were intended to serve as an early warning system for caribou approaching the WTHR to support mitigation measures during migration. In February 2020, surveys began using the twelve viewshed locations along the WTHR. In 2021, viewshed survey locations were adjusted based on areas with high caribou use and points of high elevation within areas with high caribou use, and an additional survey location was added. Thirteen viewshed locations were surveyed on 99 occasions in 2024.

7.2 Objectives

The purpose of the viewshed surveys is to provide an ‘early warning’ system of the presence of caribou in proximity to the WTHR. The viewshed surveys provide a series of standardized locations to repeatedly and safely survey throughout the year to produce estimates of caribou moving through the Project.

7.3 Methods

From 2017 to 2019, five height-of-land (HOL) locations were surveyed along the WTHR. The locations were within 500 m of the WTHR and provided an unobstructed view of the surrounding terrain. The HOL surveys were replaced by viewshed surveys and 13 viewshed survey locations were established along the WTHR in a desktop review to maximize the area around the WTHR that could be surveyed (Golder 2020b). Survey locations were established to cover the length of the WTHR. In 2024, 13 viewshed locations were surveyed as shown in Figure 7-1. While conducting the viewshed surveys, observers spent 10 minutes surveying for wildlife using a combination of naked eye, binoculars, and/or spotting scopes to maximize sighting distance. If a caribou group is observed, the observer estimates the number of individuals, direction from observer, distance from road, behaviour, direction of travel, and habitat. These results are then used to determine if a Group Size Threshold (GST) has been reached and if mitigation action is required.

7.4 Historical Results

During HOL surveys in 2019, a total of 12 species were observed (Table 7-1). The highest number of caribou were observed during the spring caribou season, followed by the fall and then summer seasons (Table 7-1). No caribou were observed during the winter caribou season.

In 2020, HOL surveys transitioned to viewshed surveys. Between 2020 and 2023, 2,557 viewshed surveys were conducted on 191 dates: 49 summer dates, 34 spring, 67 fall, and 41 winter dates. Across years, only 197 of the 2,557 surveys (8%) had caribou sightings. Historically, caribou were more often sighted on the west side of the road (60% of observations from 2021 to 2023), at distances of less than 1 km (Mean distance = 869 meters from 2021 to 2023). The majority of caribou observations (69%) occurred when the average sighting distance was greater than 1 km, indicating these surveys are most effective in good visibility conditions. Along with caribou, more than 17 other species of mammal and bird have been observed from viewshed surveys (

). Historical results from the 2020 to 2023 viewshed surveys are presented in

.

Table 7-1: Total Number of Wildlife Observed during Height of Land Surveys along the Whale Tail Haul Road in 2019

Species	Caribou Seasons			
	Spring 01 Apr to 25 May	Summer 26 May to 21 Sep	Fall 22 Sep to 15 Dec	Winter 16 Dec to 31 Mar
Mammals				
Arctic hare	2	3	3	0
Caribou	842	177	529	0
Muskox	17	16	0	32
Wolf	0	0	1	0
Wolverine	0	0	1	1
Birds				
Canada goose	0	6	0	0
Unidentified Goose	0	167	0	0
Unidentified Gull	0	2	0	0
Unidentified Owl	0	2	0	0
Ptarmigan	0	19	15	0
Snow bunting	0	10	0	0
Snow goose	0	346	0	0

Table 7-2: Total Number of Wildlife Observed during Viewshed Surveys along the Whale Tail Haul Road from 2020 to 2023

Year	Species	Caribou Seasons			
		Spring 01 Apr to 25 May	Summer 26 May to 21 Sep	Fall 22 Sep to 15 Dec	Winter 16 Dec to 31 Mar
2020	**Mammals**				
	Arctic hare	1	0	0	0
	Caribou	247	5	0	0
	Muskox	1	7	0	0
	Birds				
	Common raven	0	1	0	0
	Sandhill crane	0	1	0	0
2021	**Mammals**				
	Arctic fox	-	1	2	0
	Arctic ground squirrel	-	1	0	0
	Arctic hare	-	2	0	0
	Caribou	-	149	41	0
	Muskox	-	20	35	2
	Birds				
	Canada goose	-	13	0	0
	Common raven	-	0	1	1
	Ptarmigan	-	0	5	0
	Sandhill crane	-	2	0	0
	Snow goose	-	38	0	0

Table 7-2: Total Number of Wildlife Observed during Viewshed Surveys along the Whale Tail Haul Road from 2020 to 2023

Year	Species	Caribou Seasons			
		Spring 01 Apr to 25 May	Summer 26 May to 21 Sep	Fall 22 Sep to 15 Dec	Winter 16 Dec to 31 Mar
2022	**Mammals**				
	Arctic fox	0	2	0	0
	Arctic hare	0	1	0	0
	Caribou	345	70	29	17
	Muskox	73	62	110	12
	Wolf	0	1	0	0
	Birds				
	American crow	0	1	3	2
	Canada goose	32	7	0	0
	Common raven	3	0	0	0
	Greater white-fronted goose	36	0	0	0
	Ptarmigan	1	1	0	0
	Rough-legged hawk	2	0	0	0
	Snow goose	0	233	0	0
2023	**Mammals**				
	Arctic fox	0	1	2	2
	Caribou	4,028	95	313	6
	Muskox	26	62	294	80
	Wolf	1	1	0	0
	Birds				
	American crow	0	1	0	0
	Canada goose	0	19	13	0
	Common raven	0	0	0	1
	Unidentified duck	0	1	0	0
	Gyrfalcon	0	0	1	0
	Rough-legged hawk	0	1	0	0
	Snow goose	0	54	0	0

7.5 2024 Results

Viewshed surveys were conducted on 99 dates in 2024, though not all locations were surveyed each day. A total of 1,467 surveys were conducted between 1 January and 31 December, with the highest survey effort occurring in the fall (34.5%, Table 7-3).

Table 7-3: Viewshed Survey Effort by Season, 2024

Season	Survey Days	Surveys Completed (% of total effort)
Spring	23	373 (25.4%)
Summer	18	289 (19.7%)
Fall	36	506 (34.5%)
Winter	22	299 (20.4%)
Total	**99**	**1,467 (100%)**

Table 7-4 shows the dates in which caribou were observed, and the number observed, from each viewshed survey location in 2024. Of the viewshed surveys completed, 82 surveys (6%) had caribou sightings, and a total of 1,945 caribou were recorded (Table 7-4). All survey locations had surveys with caribou detections (Table 7-4). Caribou sightings from viewsheds ranged from 11 instances (Viewshed 13) to 2 instances (Viewsheds 8 and 10; Table 7-4).

Of the 82 surveys with caribou sightings, 48 occurred during the spring, 22 occurred during the summer, 8 occurred during the fall, and 4 occurred during winter (Table 7-4).

The number of caribou observed ranged from 1-200 individuals (Table 7-5). Caribou were sighted more frequently to the west and the average sighting distance was 1,080 m from the road. Most observations (97%) occurred when visibility was at least 1 km.

Other mammals recorded during viewshed surveys include Arctic fox, hare and ground squirrel, muskox and wolf. Bird species recorded include Canada goose, common raven, gyrfalcon, rough-legged hawk, snow goose, sandhill crane, and ptarmigan (Table 7-6).

Table 7-4: Viewshed Surveys Completed and Number of Caribou Observed per Season in 2024

Date	Viewshed Survey Location												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Spring Caribou Season (01 Apr – 25 May)													
2024-04-05	0	0	0	0	0	0	0	0	0	0	0	20	0
2024-04-09	0	77	0	0	11	16	0	0	0	0	0	0	0
2024-04-21	0	0	0	0	0	0	0	0	0	0	150	14	3
2024-04-23	0	0	0	98	103	19	0	75	125	75	35	36	9
2024-04-28	0	0	0	0	0	0	90	0	0	0	25	0	20
2024-05-02	0	0	0	0	17	0	0	30	0	0	0	0	0
2024-05-04	0	0	0	0	9	17	0	0	23	0	29	0	0
2024-05-07	0	0	0	7	0	0	0	0	0	0	0	0	12
2024-05-10	0	0	0	0	4	0	0	0	0	0	0	0	0
2024-05-12	0	0	2	2	9	0	0	0	0	0	0	6	0
2024-05-13	6	0	0	0	0	0	0	0	0	0	0	0	6
2024-05-14	0	0	14	0	15	0	0	0	0	0	0	0	0
2024-05-15	0	0	0	0	0	0	0	0	0	0	0	6	0
2024-05-18	0	0	0	0	3	0	0	0	0	0	0	0	0
2024-05-19	0	0	2	19	12	0	0	0	0	0	17	22	0
2024-05-21	0	0	0	10	0	0	0	0	0	0	0	0	0
2024-05-22	0	0	0	3	0	0	0	0	0	0	0	0	3
2024-05-23	7	0	0	0	0	0	0	0	0	0	0	0	0
2024-05-24	0	0	0	0	0	5	0	0	0	0	0	0	0
Summer Caribou Season (26 May – 21 Sep)													
2024-05-29	0	8	3	7	0	0	0	0	0	0	0	0	11
2024-05-31	0	0	4	0	0	0	9	0	0	0	0	0	0
2024-06-04	1	2	0	0	0	0	0	0	0	0	4	0	12
2024-06-06	0	0	11	0	0	2	16	0	0	0	0	0	0
2024-06-15	0	0	0	3	0	0	0	0	0	0	0	0	0
2024-06-24	0	0	0	0	0	6	0	0	0	0	0	0	0
2024-08-06	0	0	0	1	0	0	0	0	0	0	1	1	0
2024-08-17	0	0	0	0	0	0	0	0	1	0	0	0	0
2024-08-31	0	0	0	0	0	0	0	0	0	0	0	0	3
2024-09-14	0	0	0	0	0	0	0	0	0	0	0	4	3
Fall Caribou Season (22 Sep – 15 Dec)													
2024-10-07	0	0	0	0	0	0	0	0	0	0	14	0	0
2024-10-11	0	0	0	0	0	0	15	0	0	0	0	0	0
2024-11-27	0	0	0	200	0	0		0	0	0	0	0	142
2024-12-01	0	0	0	0	11	0	0	0	0	31	0	0	0
2024-12-06	19	0	45	0	0	0	0	0	0	0	0	0	0
Winter Caribou Season (16 Dec – 31 Mar)													
2024-01-01	0	0	0	0	0	0	23	0	0	0	0	0	0
2024-01-16	0	0	0	0	0	0	8	0	0	0	0	0	0
2024-01-21	0	0	0	0	0	0	0	0	0	0	2	0	0
2024-01-25	0	0	4	0	0	0	0	0	0	0	0	0	0
Summary Values													
Total Count	33	87	85	350	194	65	161	105	149	106	277	109	224
Total Sightings	4	3	8	10	10	6	6	2	3	2	9	8	11

Table 7-5: Survey Condition Details for Viewshed Surveys with Caribou Sightings, 2024

Survey Location	Date	Temperature (°C)	Wind Speed (km/hr)	Visibility*	Cardinal Direction	Number	Habitat	Behaviour	Distance from road (m)
Spring Caribou Season (01 Apr - 25 May)									
Viewshed 12	2024-04-05	-12	10	> 1 km	West	20	Heath Tundra	Walking	500
Viewshed 02	2024-04-09	-6	5	100 m	West	77	Heath Tundra	Walking	100
Viewshed 05	2024-04-09	-6	5	100 m	West	11	Heath Tundra, Ice	Feeding	250
Viewshed 06	2024-04-09	-6	5	100 m	West	16	Heath Tundra, Ice	Alert	300
Viewshed 11	2024-04-21	-26	26	> 1 km	West	150	Heath Tundra	Foraging	1000
Viewshed 12	2024-04-21	-26	26	> 1 km	West	14	Heath Tundra	Alert	500
Viewshed 13	2024-04-21	-26	26	> 1 km	West	3	Heath Tundra	Walking	200
Viewshed 04	2024-04-23	-17	15	> 1 km	West	98	Birch & Riparian Shrub	Walking	350
Viewshed 05	2024-04-23	-17	15	> 1 km	West	103	Heath Tundra, Ice	Walking	500
Viewshed 06	2024-04-23	-17	15	> 1 km	West	19	Heath Tundra	Resting	250
Viewshed 08	2024-04-23	-17	15	> 1 km	West	75	Heath Tundra	Walking	1500
Viewshed 09	2024-04-23	-17	15	> 1 km	West	125	Heath Tundra	Foraging	350
Viewshed 10	2024-04-23	-17	15	> 1 km	West	75	Heath Tundra	Walking	500
Viewshed 11	2024-04-23	-17	15	> 1 km	West	35	Heath Tundra	Walking	1250
Viewshed 12	2024-04-23	-17	15	> 1 km	West	36	Heath Tundra	Walking	2000
Viewshed 13	2024-04-23	-17	15	> 1 km	West	9	Heath Tundra	Walking	1500
Viewshed 07	2024-04-28	-17	20	> 1 km	East	5	Heath Tundra, Road	Walking	0
Viewshed 07	2024-04-28	-17	20	> 1 km	West	85	Heath Tundra, Hilltop, Lichen-Rock, Rock & Boulder	Lying Down	120
Viewshed 11	2024-04-28	-17	20	> 1 km	West	25	Heath Tundra, Hilltop	Foraging	3000
Viewshed 13	2024-04-28	-17	20	> 1 km	West	20	Heath Tundra	Foraging	2800
Viewshed 05	2024-05-02	-5	18	> 1 km	East	17	Hilltop	Walking	2500
Viewshed 08	2024-05-02	-5	18	> 1 km	West	30	Heath Tundra	Walking	1000
Viewshed 05	2024-05-04	-6	3	> 1 km	East	9	Heath Tundra	Foraging	30
Viewshed 06	2024-05-04	-6	3	> 1 km	West	17	Heath Tundra	Foraging	3000
Viewshed 09	2024-05-04	-6	3	> 1 km	West	23	Heath Tundra	Walking	2500
Viewshed 11	2024-05-04	-6	3	> 1 km	West	29	Heath Tundra	Foraging	2000
Viewshed 04	2024-05-07	-1	6	> 1 km	West	7	Heath Tundra	Lying Down	3000
Viewshed 13	2024-05-07	-1	6	> 1 km	West	12	Heath Tundra	Walking	3000
Viewshed 05	2024-05-10	1	6	> 1 km	West	4	Heath Tundra	Walking	2000
Viewshed 03	2024-05-12	-3	5	> 1 km	West	2	Ice	Walking	1500
Viewshed 04	2024-05-12	-3	5	> 1 km	West	2	Ice	Walking	1500
Viewshed 05	2024-05-12	-3	5	> 1 km	West	9	Heath Tundra	Foraging	1000
Viewshed 12	2024-05-12	-3	5	> 1 km	West	6	Heath Tundra	Foraging	1000
Viewshed 01	2024-05-13	-2	8	> 1 km	West	6	Heath Tundra	Walking	600
Viewshed 13	2024-05-13	-2	8	> 1 km	East	6	Heath Tundra	Foraging	1800
Viewshed 03	2024-05-14	-2	30	1 km	West	14	Heath Tundra	Walking	2000
Viewshed 05	2024-05-14	-2	30	1 km	West	15	Heath Tundra	Foraging	1200
Viewshed 12	2024-05-15	-5	27	1 km	West	6	Heath Tundra	Foraging	150
Viewshed 05	2024-05-18	2	20	> 1 km	East	3	Heath Tundra	Foraging	600
Viewshed 03	2024-05-19	2	13	> 1 km	West	2	Ice	Walking	1200

Table 7-5: Survey Condition Details for Viewshed Surveys with Caribou Sightings, 2024

Survey Location	Date	Temperature (°C)	Wind Speed (km/hr)	Visibility*	Cardinal Direction	Number	Habitat	Behaviour	Distance from road (m)
Viewshed 04	2024-05-19	2	13	> 1 km	West	7	Hilltop	Foraging	1500
Viewshed 04	2024-05-19	2	13	> 1 km	West	12	Heath Tundra	Foraging	500
Viewshed 05	2024-05-19	2	13	> 1 km	East	11	Heath Tundra	Resting	400
Viewshed 05	2024-05-19	2	13	> 1 km	West	1	Heath Tundra	Foraging	200
Viewshed 11	2024-05-19	2	13	> 1 km	West	17	Heath Tundra	Walking	2000
Viewshed 12	2024-05-19	2	13	> 1 km	West	22	Heath Tundra	Foraging	1500
Viewshed 04	2024-05-21	2	11	> 1 km	West	10	Heath Tundra	Walking	1800
Viewshed 04	2024-05-22	0	15	> 1 km	East	3	Heath Tundra	Walking	200
Viewshed 13	2024-05-22	0	15	> 1 km	West	3	Heath Tundra	Foraging	150
Viewshed 01	2024-05-23	5	15	> 1 km	West	6	Heath Tundra	Resting	2000
Viewshed 01	2024-05-23	5	15	> 1 km	West	1	Heath Tundra	Standing	1800
Viewshed 06	2024-05-24	5	5	> 1 km	West	5	Heath Tundra	Resting	600
Viewshed 12	2024-04-05	-12	10	> 1 km	West	20	Heath Tundra	Walking	500
Viewshed 02	2024-04-09	-6	5	100 m	West	77	Heath Tundra	Walking	100
Viewshed 05	2024-04-09	-6	5	100 m	West	11	Heath Tundra, Ice	Feeding	250
Viewshed 06	2024-04-09	-6	5	100 m	West	16	Heath Tundra, Ice	Alert	300
Viewshed 11	2024-04-21	-26	26	> 1 km	West	150	Heath Tundra	Foraging	1000
Viewshed 12	2024-04-21	-26	26	> 1 km	West	14	Heath Tundra	Alert	500
Viewshed 13	2024-04-21	-26	26	> 1 km	West	3	Heath Tundra	Walking	200
Viewshed 04	2024-04-23	-17	15	> 1 km	West	98	Birch & Riparian Shrub	Walking	350
Viewshed 05	2024-04-23	-17	15	> 1 km	West	103	Heath Tundra, Ice	Walking	500
Viewshed 06	2024-04-23	-17	15	> 1 km	West	19	Heath Tundra	Resting	250
Viewshed 08	2024-04-23	-17	15	> 1 km	West	75	Heath Tundra	Walking	1500
Viewshed 09	2024-04-23	-17	15	> 1 km	West	125	Heath Tundra	Foraging	350
Viewshed 10	2024-04-23	-17	15	> 1 km	West	75	Heath Tundra	Walking	500
Viewshed 11	2024-04-23	-17	15	> 1 km	West	35	Heath Tundra	Walking	1250
Viewshed 12	2024-04-23	-17	15	> 1 km	West	36	Heath Tundra	Walking	2000
Viewshed 13	2024-04-23	-17	15	> 1 km	West	9	Heath Tundra	Walking	1500
Viewshed 07	2024-04-28	-17	20	> 1 km	East	5	Heath Tundra, Road	Walking	0
Viewshed 07	2024-04-28	-17	20	> 1 km	West	85	Heath Tundra, Hilltop, Lichen-Rock, Rock & Boulder	Lying Down	120
Viewshed 11	2024-04-28	-17	20	> 1 km	West	25	Heath Tundra, Hilltop	Foraging	3000
Viewshed 13	2024-04-28	-17	20	> 1 km	West	20	Heath Tundra	Foraging	2800
Viewshed 05	2024-05-02	-5	18	> 1 km	East	17	Hilltop	Walking	2500
Viewshed 08	2024-05-02	-5	18	> 1 km	West	30	Heath Tundra	Walking	1000
Viewshed 05	2024-05-04	-6	3	> 1 km	East	9	Heath Tundra	Foraging	30
Viewshed 06	2024-05-04	-6	3	> 1 km	West	17	Heath Tundra	Foraging	3000
Viewshed 09	2024-05-04	-6	3	> 1 km	West	23	Heath Tundra	Walking	2500
Viewshed 11	2024-05-04	-6	3	> 1 km	West	29	Heath Tundra	Foraging	2000
Viewshed 04	2024-05-07	-1	6	> 1 km	West	7	Heath Tundra	Lying Down	3000
Viewshed 13	2024-05-07	-1	6	> 1 km	West	12	Heath Tundra	Walking	3000
Viewshed 05	2024-05-10	1	6	> 1 km	West	4	Heath Tundra	Walking	2000

Table 7-5: Survey Condition Details for Viewshed Surveys with Caribou Sightings, 2024

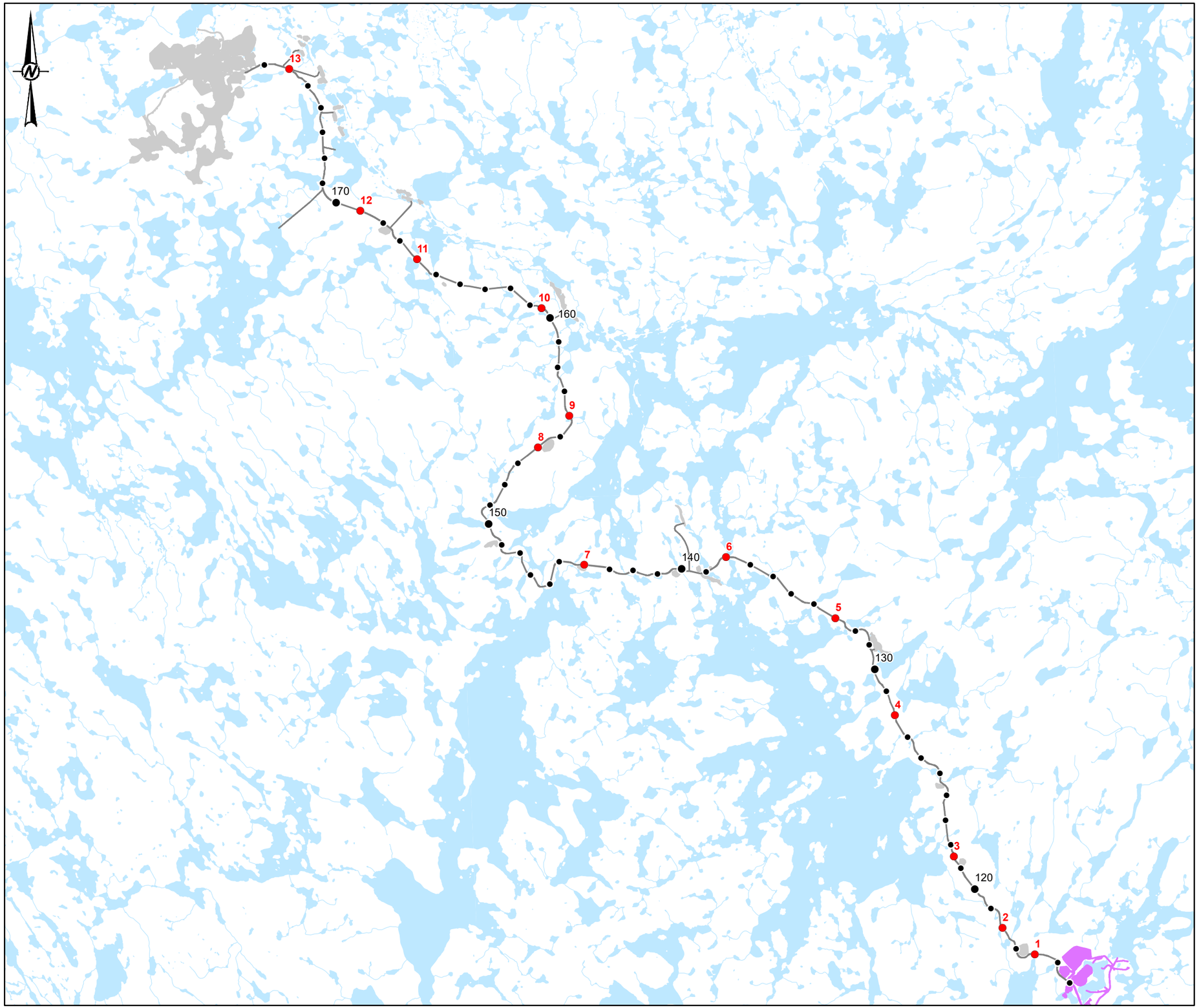
Survey Location	Date	Temperature (°C)	Wind Speed (km/hr)	Visibility*	Cardinal Direction	Number	Habitat	Behaviour	Distance from road (m)
Viewshed 03	2024-05-12	-3	5	> 1 km	West	2	Ice	Walking	1500
Viewshed 04	2024-05-12	-3	5	> 1 km	West	2	Ice	Walking	1500
Viewshed 05	2024-05-12	-3	5	> 1 km	West	9	Heath Tundra	Foraging	1000
Viewshed 12	2024-05-12	-3	5	> 1 km	West	6	Heath Tundra	Foraging	1000
Viewshed 01	2024-05-13	-2	8	> 1 km	West	6	Heath Tundra	Walking	600
Viewshed 13	2024-05-13	-2	8	> 1 km	East	6	Heath Tundra	Foraging	1800
Viewshed 03	2024-05-14	-2	30	1 km	West	14	Heath Tundra	Walking	2000
Viewshed 05	2024-05-14	-2	30	1 km	West	15	Heath Tundra	Foraging	1200
Viewshed 12	2024-05-15	-5	27	1 km	West	6	Heath Tundra	Foraging	150
Viewshed 05	2024-05-18	2	20	> 1 km	East	3	Heath Tundra	Foraging	600
Viewshed 03	2024-05-19	2	13	> 1 km	West	2	Ice	Walking	1200
Viewshed 04	2024-05-19	2	13	> 1 km	West	7	Hilltop	Foraging	1500
Viewshed 04	2024-05-19	2	13	> 1 km	West	12	Heath Tundra	Foraging	500
Viewshed 05	2024-05-19	2	13	> 1 km	East	11	Heath Tundra	Resting	400
Viewshed 05	2024-05-19	2	13	> 1 km	West	1	Heath Tundra	Foraging	200
Viewshed 11	2024-05-19	2	13	> 1 km	West	17	Heath Tundra	Walking	2000
Viewshed 12	2024-05-19	2	13	> 1 km	West	22	Heath Tundra	Foraging	1500
Viewshed 04	2024-05-21	2	11	> 1 km	West	10	Heath Tundra	Walking	1800
Viewshed 04	2024-05-22	0	15	> 1 km	East	3	Heath Tundra	Walking	200
Viewshed 13	2024-05-22	0	15	> 1 km	West	3	Heath Tundra	Foraging	150
Viewshed 01	2024-05-23	5	15	> 1 km	West	6	Heath Tundra	Resting	2000
Viewshed 01	2024-05-23	5	15	> 1 km	West	1	Heath Tundra	Standing	1800
Viewshed 06	2024-05-24	5	5	> 1 km	West	5	Heath Tundra	Resting	600
Summer Caribou Season (26 May - 21 Sep)									
Viewshed 02	2024-05-29	2	10	> 1 km	West	8	Ice	Walking	120
Viewshed 03	2024-05-29	2	10	> 1 km	West	3	Heath Tundra	Walking	390
Viewshed 04	2024-05-29	2	10	> 1 km	West	7	Heath Tundra	Lying Down	380
Viewshed 13	2024-05-29	2	10	> 1 km	West	11	Heath Tundra	Foraging	130
Viewshed 03	2024-05-31	2	50	> 1 km	West	4	Heath Tundra	Walking	250
Viewshed 07	2024-05-31	2	50	> 1 km	West	9	Heath Tundra	Lying Down	1800
Viewshed 01	2024-06-04	2	20	> 1 km	West	1	Heath Tundra	Feeding	100
Viewshed 02	2024-06-04	2	20	> 1 km	West	2	Heath Tundra	Lying Down	1500
Viewshed 11	2024-06-04	2	20	> 1 km	West	4	Heath Tundra	Alert	50
Viewshed 13	2024-06-04	2	20	> 1 km	West	12	Heath Tundra	Resting	1000
Viewshed 03	2024-06-06	-10	28	> 1 km	West	11	Ice	Walking	2000
Viewshed 06	2024-06-06	-10	28	> 1 km	West	2	Heath Tundra	Walking	1500
Viewshed 07	2024-06-06	-10	28	> 1 km	West	16	Ice	Walking	800
Viewshed 04	2024-06-15	8	13	> 1 km	West	3	Heath Tundra	Foraging	400
Viewshed 06	2024-06-24	3	20	> 1 km	West	6	Water	Walking	1000
Viewshed 04	2024-08-06	18	30	> 1 km	East	1	Heath Tundra	Foraging	20
Viewshed 11	2024-08-06	18	30	> 1 km	West	1	Heath Tundra	Walking	0

Table 7-5: Survey Condition Details for Viewshed Surveys with Caribou Sightings, 2024

Survey Location	Date	Temperature (°C)	Wind Speed (km/hr)	Visibility*	Cardinal Direction	Number	Habitat	Behaviour	Distance from road (m)
Viewshed 12	2024-08-06	18	30	> 1 km	East	1	Heath Tundra	Walking	0
Viewshed 09	2024-08-17	15	15	1 km	West	1	Heath Tundra	Walking	1000
Viewshed 13	2024-08-31	3	12	> 1 km	West	3	Heath Tundra, Lichen-Rock	Foraging	300
Viewshed 12	2024-09-14	8	50	> 1 km	West	4	Heath Tundra	Walking	400
Viewshed 13	2024-09-14	8	50	> 1 km	West	3	Heath Tundra	Walking	750
Fall Caribou Season (22 Sept – 15 Dec)									
Viewshed 11	2024-10-07	0	5	1 km	West	14	Heath Tundra	Walking	3000
Viewshed 07	2024-10-11	0	60	> 1 km	East	7	Heath Tundra, Hilltop	Standing	100
Viewshed 07	2024-10-11	0	60	> 1 km	East	8	Heath Tundra, Hilltop	Foraging	2000
Viewshed 04	2024-11-27	-15	30	> 1 km	West	200	Heath Tundra	Walking	2000
Viewshed 13	2024-11-27	-15	30	> 1 km	East	142	Heath Tundra	Walking	700
Viewshed 05	2024-12-01	-22	30	> 1 km	East	11	Heath Tundra	Walking	2000
Viewshed 10	2024-12-01	-22	30	> 1 km	East	31	Heath Tundra	Walking	150
Viewshed 01	2024-12-06	-31	15	> 1 km	West	19	Heath Tundra	Foraging	3500
Viewshed 03	2024-12-06	-31	15	> 1 km	West	45	Heath Tundra	Walking	2500
Viewshed 11	2024-10-07	0	5	1 km	West	14	Heath Tundra	Walking	3000
Winter Caribou Season (16 Dec - 31 Mar)									
Viewshed 07	2024-01-01	-28	30	> 1 km	East	23	Ice	Walking	1200
Viewshed 07	2024-01-16	-10	50	1 km	East	8	Heath Tundra	Foraging	700
Viewshed 11	2024-01-21	-33	12	> 1 km	East	2	Heath Tundra	Feeding	1000
Viewshed 03	2024-01-25	-31	30	> 1 km	East	4	Heath Tundra	Feeding	75

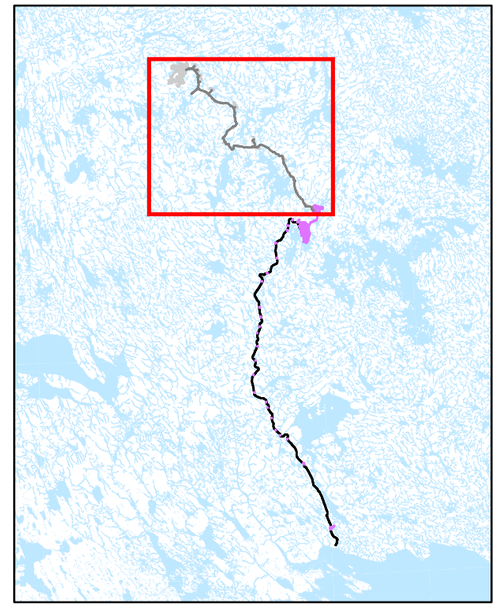
Table 7-6: Total Number of Wildlife Observed during Viewshed Surveys along the Whale Tail Haul Road in 2024

Species	Caribou Seasons			
	Spring (01 Apr to 25 May)	Summer (26 May to 21 Sep)	Fall (22 Sep to 15 Dec)	Winter (16 Dec to 31 Mar)
Mammals				
Arctic fox	0	1	0	1
Arctic hare	3	0	0	0
Arctic ground squirrel	2	2	1	0
Caribou	1318	113	477	37
Muskox	50	187	245	260
Wolf	1	1	0	0
Wolverine	1	0	0	0
Birds				
Canada goose	30	4	0	0
Common raven	1	0	5	0
Gyrfalcon	0	0	1	0
Ptarmigan	16	0	2	0
Rough-legged-Hawk	3	1	0	0
Sandhill crane	13	0	0	0
Snow goose	576	368	70	0



LEGEND

- VIEWSHED SURVEY LOCATION
- KILOMETRE MARKER
- WHALE TAIL MINE SITE
- HAUL ROAD
- MEADOWBANK MINE SITE
- WATERBODY
- WATERCOURSE



0 3 6

1:150,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. ROAD, WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

LOCATION OF VIEWSHED SURVEYS ALONG WHALE TAIL HAUL ROAD

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	7-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\99_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_07_01_VIEWSHED_SURVEY_LOCATIONS.mxd PRINTED ON: 2025-03-19 AT: 1:43:46 PM

7.6 Management Recommendations

Although more viewshed surveys were conducted in 2024 than in 2023, fewer caribou were observed using this approach. The majority of monitoring along the WTHR was conducted using the standard road surveys (Section 3.0). A comparison of the effectiveness of viewshed surveys and road surveys at detecting caribou approaching the WTHR is presented in Section 17.3, along with relevant management recommendations. Based on discussion from the fall 2024 TAG meeting (meeting #21, Agnico Eagle 2024d), viewshed surveys will be discontinued going forward and will not be conducted in 2025.

8.0 REMOTE CAMERA PROGRAM

8.1 Overview

The initial remote camera study design (October 2018 to November 2019) was intended to collect general trends on caribou crossing events and traffic or road activities on the WTHR, to inform fine scale traffic mitigation. An updated study design was implemented in November 2019, to examine the permeability of the WTHR to caribou movement as those interactions relate to the physical parameters of the road (i.e., backfill height, slope, and material grain size). The 2019 to 2022 remote camera data were previously analyzed for the 2020, 2021, 2022, and 2023 Wildlife Monitoring Summary Reports (Golder 2021, 2022, WSP 2023a, WSP 2024). Results from the 2024 remote camera program are summarized below.

8.2 Objectives

The primary objective of the remote camera program is to monitor caribou behavioural interactions with the WTHR, and adapt management practices (i.e., traffic mitigation) as required. The current remote camera program allows for comparisons to determine if caribou crossing locations along the WTHR are related to the physical parameters of the road (i.e., backfill height, slope, and material grain size) and traffic rates.

8.3 Duration

The use of remote cameras will continue throughout the year, but camera results will be analyzed and discussed at TAG meetings to ensure that the monitoring objectives are being achieved.

8.4 Methods

8.4.1 Camera Deployment and Settings

Locations of remote cameras have varied across program years (Golder 2021, 2022, WSP 2023a). The same locations were used in 2024 as in 2021, 2022, and 2023. The locations of the paired remote cameras along the WTHR were selected based on high-frequency caribou crossing locations, and stratified across road height categories (i.e., <1.5 m, 1.5 to 3 m, and >3 m; Table 8-1). Road heights were determined in the field. Backfill material and slope at camera locations were determined from construction surveys (WSP 2019). Backfill slope along the WTHR is typically 2:1. In areas where backfill height exceeds 3 m, slope was recontoured to 4:1 for safety (WSP 2019).

The program uses Reconyx HyperFire 2 Professional Covert IR Camera OD Green cameras. In the pilot program, at each location, the first camera in the pair was typically placed facing the WTHR, and the second camera was placed facing away from the WTHR. In November 2019, camera locations were updated so that at each location, the first camera in the pair was placed facing parallel to the WTHR (i.e., recording observations of caribou crossing the road) in one direction (e.g., north). The second camera in the pair was placed facing parallel to the road in the opposite direction of the first camera (e.g., south). Cameras were placed in close proximity to the road (within 5 m, approximately 1 m above ground level), to provide a field of view that would capture road traffic and caribou interactions with the road. The majority of camera positions were adjusted for 2021 to encompass both sides of the road to better document caribou crossing events and vehicle traffic. Camera timing was set to the continuous motion-triggered setting, with additional timed interval photographs occurring in thirty minute or one-hour intervals. Maintenance checks were performed weekly throughout the year to remove dust, snow, or ice accumulated on cameras, and back up photographs as required.

Table 8-1: Remote Camera Locations along the Whale Tail Haul Road, 2024

Camera Pair	Camera Label	KM Location Reference	Road Height (m)	Backfill Material	Backfill Slope (Horizontal:Vertical)
1	AECC01/AECC02	118	>3	Rock	4:1
2	AECC03/AECC04	132	>3	Esker	4:1
3	AECC05/AECC06	136	1.5 to 3	Rock	2:1
4	AECC07/AECC08	172	1.5 to 3	Rock	2:1
5	AECC09/AECC10	157	1.5 to 3	Esker	2:1
6	AECC11/AECC12	152	<1.5	Mix	2:1
7	AECC13/AECC14	138	>3	Rock	2:1
8	AECC15/AECC16	161	<1.5	Esker	2:1
9	AECC17/AECC18	170	<1.5	Rock	2:1
10	AECC19/AECC20	146	>3	Rock	4:1

> = greater than; < = less than; km = kilometre; m = metre; UTM = Universal Transect Mercator.

8.4.2 Photograph Review

Previous years of the remote camera program focused on manual review of time lapse photographs, rather than motion-triggered photographs (Golder 2022). Due to the open nature of the habitat along the WTHR, caribou infrequently walk directly in front of cameras, and so, infrequently activate motion-triggered photographs. Photographs in 2024 were pre-sorted using artificial intelligence (Section 8.4.3). The artificial intelligence was run over both motion and time-lapse photographs from the entire year.

Photographs identified as wildlife by the artificial intelligence were manually reviewed by a human observer and identified to species. Individuals of wildlife species were not considered separate detections during manual review, until either an hour had passed or until there was a distinguishable difference between separate individuals triggering the camera. All animals present within the field of view within each photo were counted. Wildlife were counted within the field-of view only and not in the background to avoid including animals that did not pass within the camera field-of view during the survey (e.g., animals over a kilometer away observed in the background). During analysis, for each independent event, the highest animal count of all photos within the independent event was used as the animal count. Instances of caribou crossing the road were recorded where applicable.

8.4.3 Artificial Intelligence Classification

An automated approach was used to classify the 2,500,329 photos collected in 2024. MegaDetector was used for general processing. It is a model trained with a large amount of data and is able to detect wildlife at various distances within the camera field-of-view. Bounding boxes with probability, coordinates, and class (animal, truck, or human) were applied to images. False detections of static objects (i.e., stones) were removed by comparing coordinates of objects between sequential images and allowed 5% deviation in the coordinates. False detections from bad weather or flags in front of camera were removed by checking for large (60-80% of FOV) bounding box size on images. Additional false detections from trucks, flags, far away, or the sun were removed through use of a custom Yolo model and comparison of bounding boxes. Any remaining images in the object list also classed as an animal are placed in the results folder for human review and labelling.

8.4.4 Data Analysis

Sampling effort or number of days each camera was considered active is required to calculate an overall caribou detection rate. For this analysis, the cameras were considered active for the entire year. Some cameras only captured one wildlife photograph within a given season, so using the first and last dates with wildlife photos for a given season or using the number of dates with wildlife observations to calculate sampling effort would not be accurate. Given that the cameras were maintained every week throughout the year (so field of view obstruction issues would be addressed promptly), assuming a complete sampling effort for the year provided the most accurate sampling efforts.

An overall caribou detection rate was calculated, based on the number of individuals observed at each camera pair within the camera field of view, divided by the camera station sampling effort in days for each season. A caribou crossing rate was also calculated, based on the number of crossing events observed, divided by the camera station sampling effort in days for each season. To prevent double counting caribou at camera pairs, the maximum caribou and caribou crossing rate at each camera pair is presented by season.

Only events where caribou were photographed on the road, or individuals of a group were observed on either side of the road were considered crossing events. Caribou counts may be subject to error due to distance of caribou groups from cameras. Caribou groups had to be detected on both sides of the road to count as crossing events, and some crossing events beyond the range of the camera are likely missed due to the interval between time-lapse photographs or the relatively short distance of the motion sensor (~30 m limit).

8.5 Results

In 2024, a total of 2,099 photographs were selected by the automated approach and reviewed by a human observer. There were 323 total wildlife observations across 224 observation events. Fourteen species were detected in 2024: Arctic fox, Arctic ground squirrel, Arctic hare, Canada goose, caribou, common raven, grey wolf, muskox, rock ptarmigan, snow goose, wolverine, and unidentified bird species including a duck species, gull species, and passerine species.

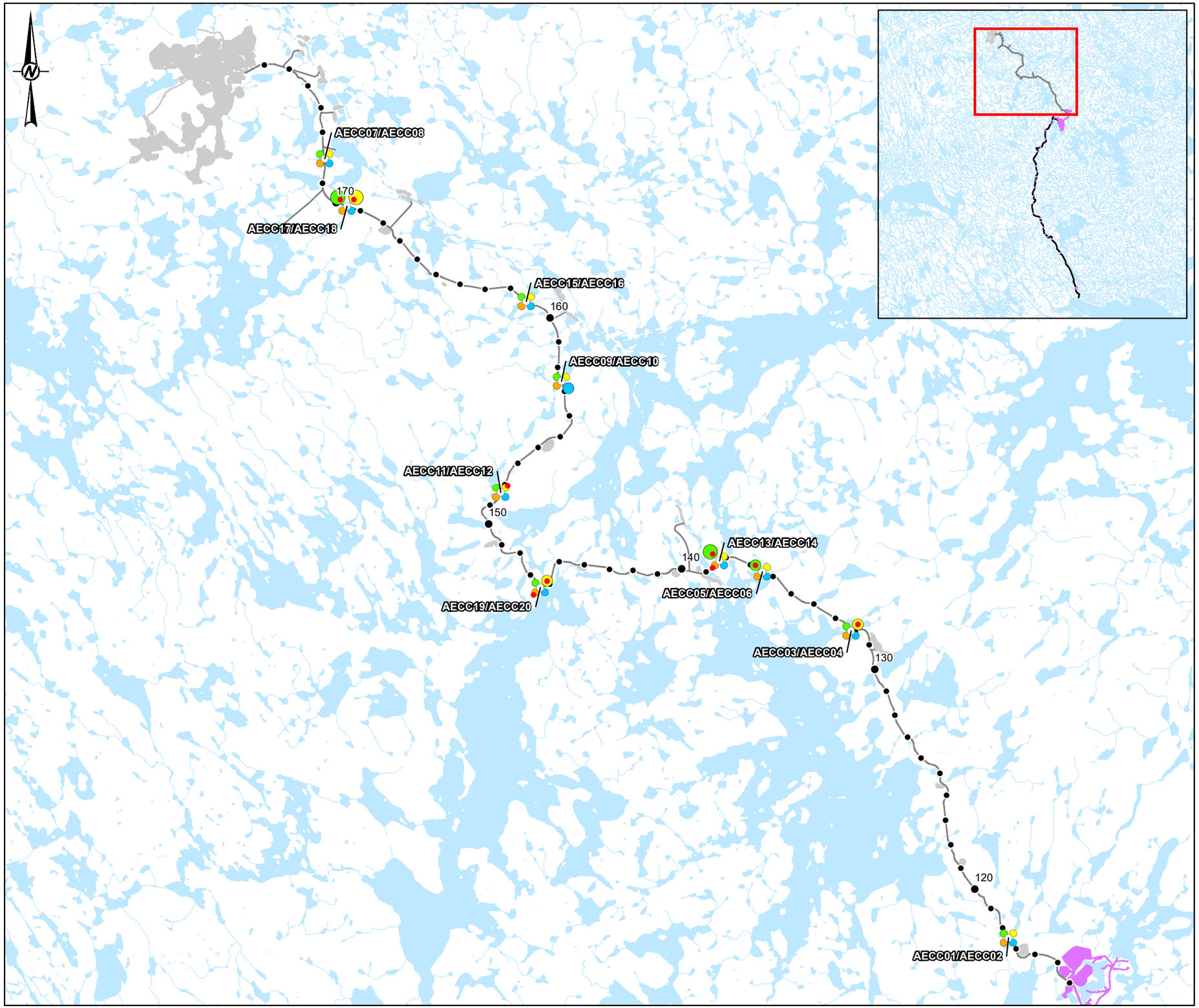
Caribou were detected between 18 February 2024 and 26 September 2024. Caribou were detected on all ten camera monitoring locations except for camera pair 1, and caribou crossing events were recorded on six of ten camera monitoring locations (Table 8-2). Caribou crossing events were detected in all seasons except for winter. Caribou detections were highest in summer (58%), second highest is spring (34%), and were lower during fall and winter (3% and 4%, respectively).

The highest caribou detection rate occurred at camera pair 9 (KM 170) in the summer, followed by the camera pair 9 spring rates. The highest crossing rate was observed at camera pair 9 in the summer (Figure 8-1; Table 8-2). Detection rates are variable as only individuals within the field of view at the same time are counted, with the highest count out of all photos of an event being used. There were 14 crossing events in 2024 (Table 8-3). Four crossing events were observed on days with an open road status, seven on days with a 24 hour closure or a partial closure (<24 hours) status, and three on days with speed restrictions in effect (Table 8-3). The largest caribou crossing observed included hundreds of caribou in the background of images, which occurred at 2:00 AM on 31 July 2024, during which time the WTHR was closed (status: < 24-hour closure; Table 8-3). Because the hundreds of caribou in the background were not near the camera field of view, they were not reflected in the detection rate for camera pair 9.

Table 8-2: Caribou Detection Rates (Caribou Observations/Active Day) from Remote Cameras in 2024

Camera Pair	Spring		Summer		Fall		Winter	
	Caribou Rate	Crossing Rate	Caribou Rate	Crossing Rate	Caribou Rate	Crossing Rate	Caribou Rate	Crossing Rate
1	-	-	-	-	-	-	-	-
2	-	-	0.03	0.01	-	-	-	-
3	0.09	0.02	-	-	-	-	-	-
4	-	-	0.01	-	-	-	-	-
5	0.02	-	-	-	-	-	0.04	-
6	0.02	-	0.01	0.01	-	-	-	-
7	0.18	0.02	-	-	0.01	0.01	-	-
8	0.02	-	-	-	-	-	-	-
9	0.25	0.02	0.38	0.05	-	-	-	-
10	-	-	0.03	0.01	0.02	0.01	-	-

Note: “-” denotes a detection rate of 0.00.



LEGEND

- REMOTE CAMERA LOCATION
- CARIBOU CROSSING

CARIBOU RATE SPRING (CARIBOU/ACTIVE CAMERA DAYS)

- 0.00 - 0.02
- 0.02 - 0.10
- 0.10 - 1.00

CARIBOU RATE SUMMER (CARIBOU/ACTIVE CAMERA DAYS)

- 0.00 - 0.02
- 0.02 - 0.10
- 0.10 - 1.00

CARIBOU RATE FALL (CARIBOU/ACTIVE CAMERA DAYS)

- 0.00 - 0.02
- 0.02 - 0.10
- 0.10 - 1.00

CARIBOU RATE WINTER (CARIBOU/ACTIVE CAMERA DAYS)

- 0.00 - 0.02
- 0.02 - 0.10
- 0.10 - 1.00

- KILOMETRE MARKER
- WHALE TAIL MINE SITE
- HAUL ROAD
- MEADOWBANK MINE SITE
- WATERBODY
- WATERCOURSE

0 3 6

1:150,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. ROAD, WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

CARIBOU DETECTION AND CROSSING RATES FROM REMOTE CAMERA DATA (2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JP
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	8-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_08_01_CARIBOU_DETECTION_CROSSING_RATES_2024.mxd PRINTED ON: 2025-03-19 AT: 1:45:00 PM

Table 8-3: Caribou Crossing Events on Remote Cameras, 2024

Camera Pair	Crossing Time	Number of Individuals	Road Closure Status
CP07	2024-04-23 21:35	2	Closed
CP03	2024-04-25 22:02	3	Closed
CP09	2024-04-26 4:48	3	Closed
CP09	2024-07-31 2:00	1	Closed (< 24 hour) [(a)]
CP09	2024-07-31 3:19	1	Closed (< 24 hour) [(a)]
CP09	2024-07-31 4:07	1	Closed (< 24 hour) [(a)]
CP09	2024-07-31 6:04	1	Closed (< 24 hour) [(a)]
CP09	2024-08-06 13:00	1	Speed Restriction
CP10	2024-08-08 0:55	1	Speed Restriction
CP09	2024-08-16 5:30	1	Open
CP02	2024-08-19 11:24	1	Speed Restriction
CP06	2024-08-26 20:08	1	Open
CP10	2024-09-25 16:03	2	Open
CP07	2024-09-26 19:38	1	Open

(a) WHTR was closed at the time of the crossing event.

8.6 Management Recommendations

The use of artificial intelligence expedited processing of remote camera photographs and was able to process a large number of photographs (2,500,329), which would not be feasible by manual processing. Although some wildlife detections are expected to be missed through this approach, more wildlife may be detected overall through analysis of a greater number of photographs. It is assumed that some photographs with far-away wildlife were not detected by the automated approach.

Results from 2024 indicate lower rates of caribou and caribou crossings compared to 2023 and 2022 data (Golder 2022, WSP 2023a). This aligns with variation in the overall amount of caribou interactions with the Project across years (WSP 2023c). Overall, few crossing events were detected on remote cameras, and conclusions on how road characteristics influence caribou crossing behaviour cannot be drawn at this time.

The path forward for the remote camera program was discussed with the TAG at the fall 2024 TAG meeting (Agnico Eagle 2024d). The remote camera program is unlikely to contribute to adaptive management but could potentially provide insight into time between vehicle traffic and caribou crossing events. A new study design will be developed for the remote camera program including several objectives brought forward by the TAG (Agnico Eagle 2024d). The primary objective will be to quantify daily traffic rates on the AWAR and WTHR, the secondary objective will be to estimate duration of convoys, and the tertiary objective will be to examine caribou crossings in relation to vehicle traffic.

9.0 BLAST MONITORING

9.1 Overview

The purpose of the blast monitoring program at the Whale Tail Mine is to understand how blasting vibration relates to caribou behaviour. The program involves monitoring caribou behavior before, during, and after a blast, as well as establishing relationships between vibration and overpressure levels and blasting parameters (e.g., charge mass, charge depth), environmental conditions (e.g., seasonal variation), and propagation distances.

Blasting is delayed when caribou or other wildlife are observed within the blast danger zone (typically 600 m from the blast centre). According to the TEMP, blasting is also delayed when caribou GST is observed within 4 km during the sensitive season, or within 5 km during the calving period, or when muskox GST is observed within 1 km (Agnico Eagle 2019). Following discussion with the TAG, the distance was relaxed to 3 km for caribou during the sensitive season, and 5 km during the calving period, to better understand effects to caribou from blasting. The Environment Department performs monitoring prior to each blast to ensure no caribou groups exceeding GST are present within these setback distances.

9.2 Objectives

The purpose of the blast monitoring program is to determine if blasts conducted at the Whale Tail Mine influence caribou behavior. This is done by using behavior as a proxy of blast disturbance, determining if blasts exceed vibration annoyance or damage thresholds, and testing any potential relationship between blasting (i.e., vibration and overpressure) and behaviour.

9.3 Duration

Caribou behavioural responses to blasting events was assessed in in 2021, 2022, and 2024. These data were used to determine site-specific relationships between blasting and behaviour. Caribou behaviour monitoring will continue opportunistically until a sufficient sample size of caribou behaviour at different distances from blasting is collected and assessed.

9.4 Methods

9.4.1 Vibration and Overpressure Model

The blast monitoring program focuses on the following parameters to estimate impacts of blasting on caribou:

- Peak Particle Velocity (PPV), which characterizes ground vibration (i.e., physical shaking of the ground as a result of an explosive blast). PPV values were measured in millimetres per second (mm/s).
- Peak Pressure Level (PPL), which characterizes airblast overpressure (i.e., movement of air as a result of an explosive blast). PPL values were measured in linear decibels (dBL).

There are few if any guidelines intended to address sensory disturbance to wildlife from explosive blasting. In the absence of wildlife-specific threshold or limits, guidelines for damage and human annoyance due to blasting were used as a starting point for assessment of potential impacts to caribou. The caribou hearing threshold for low frequency noise is higher than humans, meaning that humans may be able to a detect blasting related PPL at greater distances than caribou (Agnico Eagle 2019). According to IQ, caribou may be able to detect blasting vibrations at greater distances than humans.

Most guideline limits on PPV and PPL from blasting are intended to protect against minor cosmetic damage to buildings and other structures. For example, the Environment and Climate Change Canada (ECCC) *Environmental Code of Practice for Metal Mines* (Environment Canada 2009) recommends that PPV be limited to 12.5 mm/s and PPL be limited to 128 dBL at nearby receptors. Another document commonly referenced in blasting assessments is the Australian and New Zealand Environment Council (ANZEC) *Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration* (ANZEC 1990). To protect against human annoyance, the ANZEC document recommends that PPV be limited to 5 mm/s and PPL be limited to 115 dBL at nearby receptors.

Models to describe the site-specific relationship between vibration and overpressure from explosive blasting were developed using blast monitoring data collected in 2020 and 2021. Explanation on calculation of the site-specific relationships between overpressure and vibration and blasting parameters are presented in Golder (2022) and WSP (2023b). These models can be used to estimate propagation distance of PPL and PPV based on blast charge and depth (i.e., shallow vs. deep) by season. Blast charge mass and depth from blasts in 2021, 2022, and 2024 were input into the models to estimate PPV and PPL experienced by caribou groups in which behaviour monitoring data were available. The PPV values for 2024 were derived from WSP (2023b) with a maximum estimated blast charge mass (i.e., charge mass per delay) of 1090 kg.

9.4.2 Caribou Behaviour Monitoring

Caribou behaviour monitoring in conjunction with blast events was conducted in 2021, 2022, and 2024 followed the general approach outlined in Section 17.2. Surveys were opportunistic in nature and required groups of caribou to be present during blast events. The overall method was to identify caribou groups in proximity to blasting locations prior to blast events and record behaviours of individuals every three minutes for 30 minutes before blasting and a 30-minute period beginning at the blast. The behaviour categories were feeding, lying down, standing, alert, walking, and trotting or running. In the case that a different form of disturbance event occurred during the survey, such as a vehicle driving on the road, the time and type of disturbance was recorded. Videos were recorded during blast events to document changes in caribou behaviour.

Due to challenges locating caribou groups that could be monitored near blasts for long enough periods, not all surveys had data collected before, during, and after blasts. Behaviour surveys were time corrected to align before, during and after blasts with blast timing. For example, if a blast was performed three minutes into a 30-minute survey, the three-minute interval would be corrected to zero minutes (i.e., during blast), and subsequent minutes would be reclassified as after the blast. Therefore, full thirty-minute monitoring periods were not available on all survey days where behaviour monitoring was performed. Proportions of the caribou groups performing different behaviours were summarized by the three-minute periods before, during and after blasts. Three-minute intervals alone may not represent the entire caribou response to blasting; however, this interval was chosen to increase the available data and standardize comparisons across days.

9.4.3 Caribou Behaviour and Blasting Parameters

In 2021, 2022, and 2024, the days where blasting events could be tied to caribou behaviour monitoring surveys, the average proportion of caribou response behaviours (defined as alert, walking and trotting or running) following blasts were correlated with modelled PPL and PPV levels. Due to challenges with aligning behaviour surveys with blasts, average proportion of response behaviours in an interval of six minutes following blasts were used in Spearman correlations with PPL and PPV. If two blasts were performed on the same day, the combined blast charge of both blasts and minimum distance from caribou group monitored was used in calculation of modelled PPL and PPV.

9.5 Results

9.5.1 Blast Monitoring

Blasting measurements were collected using four Instantel Minimate units in 2019 (Golder 2020c). Only two of the four Minimate units were outfitted with linear microphones per available equipment, therefore PPL could only be measured at two locations (R1 and R2). Recommendations from the 2019 program included procurement of linear microphones to allow collection of PPL at all four locations, use of external power sources that would allow for deployments to log data from multiple blasts, and enclosing units in rugged outdoor cases that would protect them from the elements. Future PPL measurements at more distant locations were recommended to characterize the maximum distance to which PPL-related annoyance impacts may extend.

Since 2019, blast monitoring has continued following these recommendations, although monitoring during 2020 was limited due to COVID-19 (Golder 2021). Consistent monitoring has demonstrated that few blasts have exceeded Environment Canada's (2009) 12.5 mm/s PPV damage threshold. When two blasts exceeded this threshold in 2020, it occurred at the measurement location closest to the Whale Tail Mine. This suggests that ground vibration from blasting may result in annoyance impacts at receptors close to the blast site. Historically, blasts have often resulted in PPL values below the 128 dBL damage threshold (Environment Canada 2009). However, the 115 dBL annoyance threshold (ANZEC 1990) has occasionally been exceeded at distances close to the Whale Tail Mine (e.g., 193 m and 569 m in 2020). This suggests that airblast overpressure from blasting may result in annoyance impacts at receptors in close proximity to the blast site. These monitoring locations (193 m and 569 m from pit edge) are closer to the bast site than the 4 km caribou distance threshold.

In 2024, two blast measures exceeded the PPV annoyance threshold of 5 mm/s (ANZEC 1990); no blast measures exceeded 12.5 mm/s threshold (Environment Canada 2009). No blasts resulted in PPL values above the 128 dBL damage threshold. Eleven blasts resulted in PPL values below the 115 dBL annoyance threshold at 569 m from the blast site location.

9.5.2 Caribou Behaviour Monitoring

9.5.2.1 Historical Results

Caribou behaviour blast monitoring occurred in 2021, 2022. During 2023, no caribou groups were observed during blast events due to blast cancellations or postponements, so behaviour data were not collected during blast events in 2023. Data from caribou behaviour monitoring was sufficient to link behavior to blasting events on 25 occurrences during 2021 (11 occurrences) and 2022 (14 occurrences). Across these two years, 1 event occurred in winter, 10 in summer, 12 in spring, and 2 in fall.

During these years, caribou responses to blasting events were varied, and changes in alert behaviours often coincided with additional vehicle disturbances. On 6 May 2021, when two blasts were performed at the same time, walking and alert behaviours increased following blasts. However, several vehicle disturbances were also recorded that appeared to elicit changes in caribou behaviour on this day. On 19 August 2021, alert behaviours were observed in the three-minute period immediately following the blast. An increase in alert and walking behaviours were observed following the blasts on 11 April, 15 April, 16 April, 24 April, and 30 April 2022 (Figure 9-1). On 15 April 2022, caribou walked towards the Mine following blasting. Walking behaviours also increased following the blast on 26 August 2022, however the increase was more delayed and mixed with an increase in lying behaviour. Caribou behaviour following the other blasts remained similar to their behaviour in the time prior to the blast, consisting primarily of lying, feeding and standing behaviours (Figure 9-1). Other forms of disturbance (e.g., vehicle traffic) occurred on five days where behaviour monitoring occurred (Figure 9-1). Vehicle traffic was recorded during behaviour monitoring on 11 April, 15 April, 7 May, and 26 August 2022. Helicopter flights were recorded on 14 June and 26 June 2022.

9.5.2.2 2024 Results

In 2024, pre-blast surveys for caribou and other wildlife were conducted on 203 occasions over 176 days between January 1st and December 31st (Table 9-1). Caribou were observed on 41 occasions and muskox were observed on three occasions during pre-blast surveys. No caribou or muskox groups exceeded GST within the setback distances; therefore, no blasting events were cancelled or postponed.

Between April 19th and September 30th, there were seven blast monitoring events. One monitoring session was performed in both spring and fall. The remaining events occurred during summer. All but one of the observed caribou groups were small with between one and three individuals observed. These groups were located an average distance of 646 meters (SE = 59.7) from the blasts. The remaining group, monitored on April 19th, consisted of 300 individuals at ~5 km from the blasting site. During three blast monitoring events, the caribou moved out of sight and their behavior during and after the blast could not be monitored. During one event, the caribou were not observed before the blast, so no baseline data could be collected. After removal of trials with incomplete data, three trials could be assessed for behaviour.

Of the three analyzed blast monitoring events in 2024, there were additional vehicle disturbances (i.e., multiple stressors) during two of these events. On July 5th, six vehicle disturbances occurred between 5- and 10-minutes post blast. On July 8th, there was a heavy equipment disturbance approximately 15 minutes pre-blast. Despite the co-occurrence of blasting and vehicle disturbances, no notable changes in behaviour occurred during behaviour monitoring in 2024 (Figure 9-1). Instead, post-blast behavior consisted primarily of feeding and lying down (Figure 9-1).

Table 9-1: Number of Pre-Blast Surveys per Month, 2024

Month	Number of Pre-Blast Surveys
January	15
February	15
March	18
April	16
May	24
June	11
July	13
August	29
September	17
October	16
November	14
December	15
Total	**203**

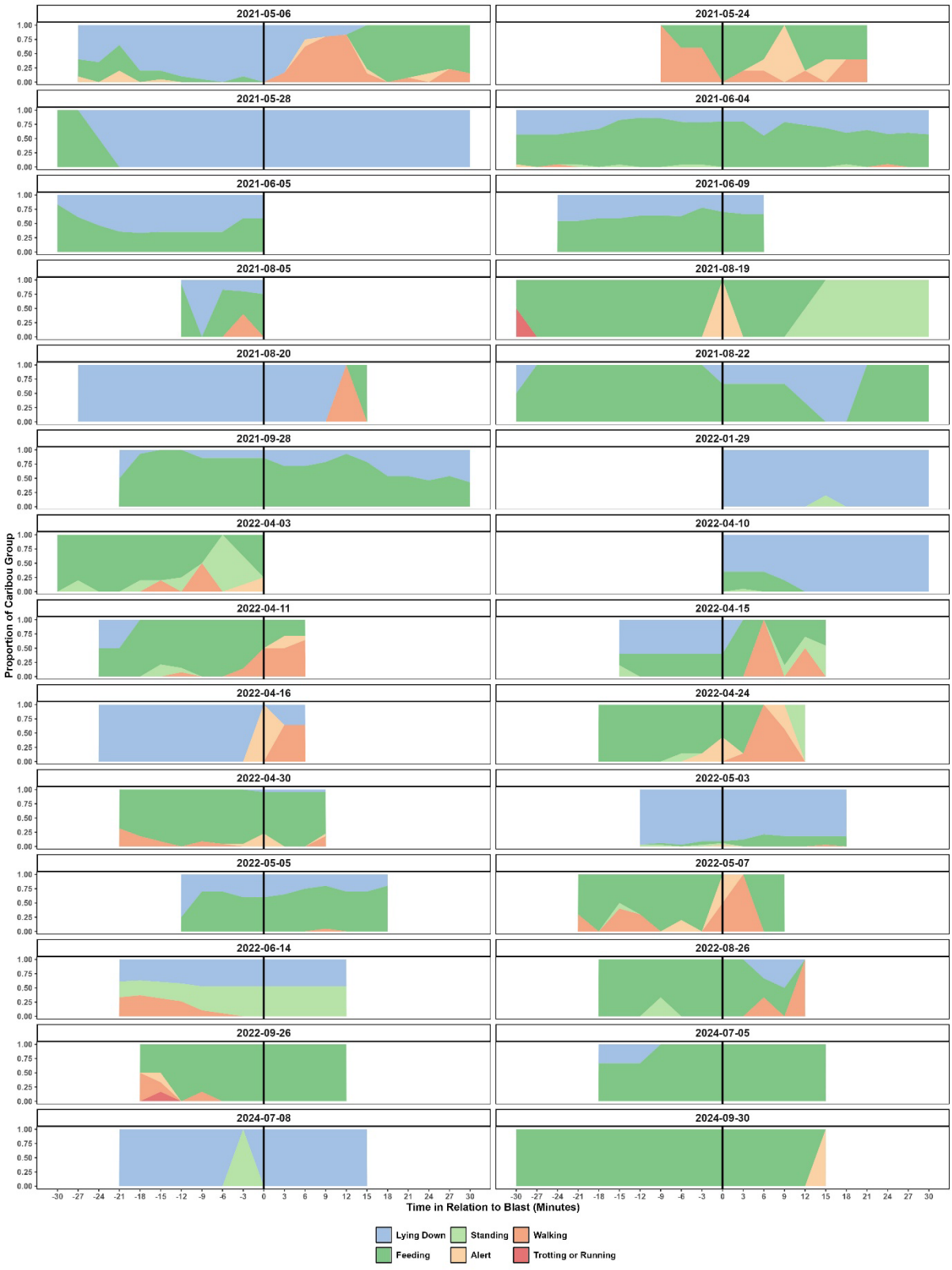


Figure 9-1: Caribou Behavioural Response Following Blasting Events Across all Three Monitoring Years

9.5.2.3 Behaviour Across Years

Across all years, there were 28 occurrences in which caribou behavior could be linked to blasting events. Caribou behaviour in the three minutes before, the three minutes during and the three minutes following a blast is shown in Figure 9-2. Across all years, on average, feeding and lying behaviours were the primary behaviours observed in each interval. An increase in alert behaviour was observed in the three-minute interval during a blast, which may correspond to the decrease in feeding behaviours during. Walking behaviours showed an increasing trend following a blast, while lying and standing behaviours did not differ much between intervals.

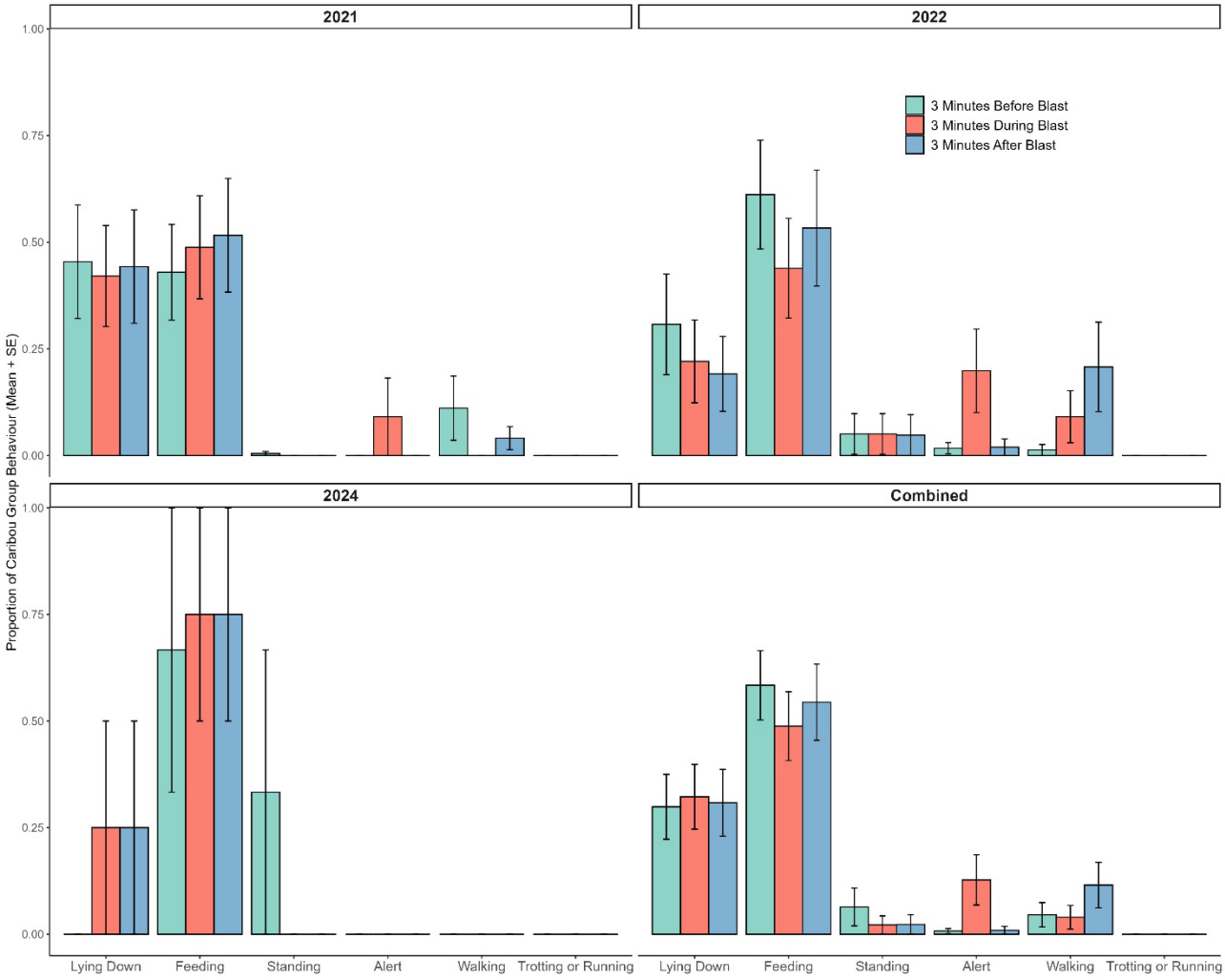


Figure 9-2: Caribou Behaviour Before, During, and After Blasting for Each Year and for all Years Combined.

9.5.3 Vibration and Overpressure Model and Behaviour

The model for PPV using the largest blast charge measured in 2021 found that PPV curve fell below the ECCC threshold approximately 350 m from the blast site and fell below the ANZECC threshold approximately 900 m from the blast site. This suggests that human receptors located more than 900 m from the Whale Tail Mine are unlikely to be annoyed by ground vibration from even the largest blasts. The model for PPL using the largest blast charge measured in 2021 found that the PPL curve fell below the ECCC threshold approximately 125 m from the blast site and fell below the ANZECC threshold approximately 1,900 m from the blast site. This suggests that human receptors located more than 1,900 m from the Whale Tail Mine are unlikely to be annoyed by airblast overpressure from even the largest blasts.

There were 21 surveys where behaviour monitoring was conducted for at least six minutes following blasting, and the locations of caribou could be linked with blasting data and modelled PPL and PPV values (Table 9-1).

All modelled values were below the PPV annoyance threshold of 5 mm/s. All modelled values for PPL were below the annoyance threshold of 115 dBL except for 05 May 2022, 30 April 2022 and three dates in 2024. Two blasts were conducted on five days used in the analysis, and three blasts were conducted on one day (Figure 9-1). Response behaviours were observed on half of the days following blasting. No response behaviours were observed in 2024. The average proportion of the caribou group performing response behaviours in six minutes following each blast based on 21 behaviour monitoring sessions, and modelled PPV (Spearman's rho = -0.25, p-value = 0.28) and PPL (Spearman's rho = -0.29, p-value = 0.19) did not appear to be correlated (Figure 9-1). A logistic regression was also used to test for a relationship between PPV and PPL and the tendency to perform any response behaviors (i.e., values greater than zero coded as 1). This model found no significant effect of either PPV (Odds Ratio = 0.47 95% CI[0.05, 1.58], p = 0.324) or PPL (Odds Ratio = 1.14, 95% CI[0.62, 2.27], p = 0.677) on response behaviours occurring.

Table 9-22: Caribou Behaviour Monitoring and Blast Data, 2021, 2022 and 2024

Blast Date	Blast Number	Quantity Explosive (kg)	Distance Between Caribou Group and Blast (m)	Proportion of Caribou Performing Response Behaviours	Predicted PPV (m/s)	Predicted PPL (dBL)
2021-05-06	5067SUK01, 5074MSK12	55,887	2,873	0.31	0.940	111.3
2021-05-28	5095MSL75	57,553	1,404	0.00	1.87	114.6
2021-06-04	5074MSK24	69,245	1,647	0.00	1.79	114.3
2021-08-19	5046PSK71	1,164.6	1,895	0.33	0.22	107.3
2021-08-22	5046PSK21, 5046PSK13	2,336	832	0.00	0.68	112.2
2021-09-28	5046PSK31, 5060MSK22	4,137	1,579	0.00	0.21	106.1
2022-01-29	5144MSM92, 5130PSM40	41,092	1,769	0.00	1.31	113.2
2022-04-10	5130MSM16	90,093	3,750	0.00	0.91	110.7
2022-04-11	5137MSR07	37,295	2,500	0.64	0.86	111.2
2022-04-15	5081MSL67	74,194	1,466	0.33	2.11	115
2022-04-16	5130PSR27, 5151MSV15	11,420	2,014	0.76	0.60	110.4
2022-04-24	5144RAV02	19,454	1,745	0.52	0.92	112.0
2022-04-30	5130MSM11	178,570	1,503	0.08	3.02	116.0
2022-05-03	5151PPR99, 5144RAR04	12,769	1,993	0.01	0.67	110.8
2022-05-05	5046MSK05	42,189	1,107	0.00	2.03	115.2
2022-06-14	5039MSK25	17,187	1,762	0.00	0.86	111.8
2022-08-26	5130RAV02	28,148	1,688	0.11	1.16	112.8
2022-09-26	5053SUI01	4,100	1,559	0.00	0.49	110.1
2024-07-05	5032MSM22 5032MSM56 5032PPM99	118,286	1,000	0.00	4.08	115.8
2024-07-08	5130MSA04	56,367	645	0.00	6.00	117
2024-09-30	5130MSA18	20,313	800	0.00	4.97	116.4

Note: 2024 Charge mass per delay values for PPV calculations are from WSP 2023b.

9.6 Management Recommendations

Caribou behaviour responses in relation blasting metrics for were recorded in 2021, 2022, and 2024. Caribou behavior was quantified before, during and after blasting and average response behaviours six minutes following blasting was assessed in relation to PPV and PPL values. Analysis suggested little behavioural response to blasting in caribou and found that post-blasting behaviour was not correlated with modelled PPV and PPL values; however, the sample size was relatively small. In 2024, caribou made no notable responses to blasting despite being within 1 km of the highest PPV and PPL values recorded in any year of monitoring. This may indicate that caribou may be less sensitive to these types of anthropogenic disturbance than previously assumed, but these results should be treated with caution due to the small sample size.

In 2024, 203 blast surveys were performed over 176 days. Despite the large number of blast surveys, only 3 viable behavioral assessments could be obtained. No viable data could be collected in 2023. The collection of usable data remains difficult due to aligning blasting events, caribou availability, and visible behavioral responses. Given these challenges, it may be necessary to continue data collection over an extended period of time. Alternatively, considering the lack of caribou in the blast vicinities and the lack of behavioral responses to blasting, the data presented herein might be considered sufficient evidence of the low frequency of blasting events effecting caribou. The results to date support that distance thresholds for suspending blasting can be reduced to less than current 3 km threshold as no strong adverse responses have been observed at distances less than 3 km.

10.0 HUNTER HARVEST STUDY

10.1 Overview

As outlined in the original TEMP (Cumberland 2006) and the June 2019 version (Agnico Eagle 2019), and as a requirement of NIRB Project Certificate No. 004 Terms and Conditions 51 and 54, the Baker Lake Hunter Harvest Study (HHS) was initiated in March 2007 by Agnico Eagle. The HHS was conducted in association with the HTO to monitor and document the spatial distribution, seasonal patterns, and harvest rates of hunter kills and angler catches within the RSA.

After low participation during the first year of the study, methods were strategically adapted, participation increased steadily, and valuable information on harvest patterns in the Baker Lake area was collected. The HHS, through regular visits, contributed to developing a strong relationship with local harvesters, the HTO, and the GN.

The HHS was suspended for three years (2016 to 2018) to develop new approaches and direction. Following consultation with the HTO, KivIA, GN, and other agencies in November 2016 (Winnipeg) and June 2017 (Ottawa), Agnico Eagle reinitiated the HHS in March 2019, which for the first time also encompassed the Whale Tail RSA as part of the Meadowbank Complex. The study approach was similar to previous years, but suggestions and guidance received during the consultation period were incorporated into the study. The study was conducted from 2020 to 2023 and continues into 2024.

The full 2024 HHS report is provided in Appendix F (Agnico Eagle 2024a).

10.2 Objectives

The primary objectives of the HHS are to monitor potential Project-related effects on harvesting of wildlife by residents of Baker Lake. This objective is achieved by estimating the following key metrics:

1) The distribution of caribou, muskox, and wolverine harvest by residents of Baker Lake.

2) The total level (or an index of) caribou, muskox, and wolverine harvest by residents of Baker Lake.

Other objectives of the HHS, established in consultation with the TAG, or other participants include:

1) Supporting creel surveys by gathering information on Arctic char (*Salvelinus alpinus*), lake trout (*Salvelinus namaycush*), lake whitefish (*Coregonus clupeaformis*), and Arctic grayling (*Thymallus arcticus*) catch rates and Inuit-use patterns in the Baker Lake area.

2) Understanding regional distribution of hunting and fishing activity.

3) Investigating seasonal timing of hunting and fishing activity.

4) Determining whether increased harvest and catch rates are associated with the AWAR and WTHR.

As discussed during consultation with stakeholders, the HHS will further seek to: a) increase and maintain the hunter participant rate in the future of the program; b) improve resource protection; c) improve hunter awareness and education; d) increase the integration of IQ and Traditional Knowledge; e) increase availability of data to support a collective approach to understanding wildlife harvest; and f) assist Agnico Eagle in mitigative actions and the GN in management decisions.

10.3 Methods

The wildlife species that are the focus of the HHS are caribou, muskox and wolverine; however, harvest data on other species, such as wolf, Arctic fox, geese, and other birds are also collected. The few species in the study were deliberately chosen to make data entry and collection as simple as possible. To support creel surveys, data on fish harvest (i.e., Arctic char, lake trout, lake whitefish, and Arctic grayling) are also collected.

Inuit and non-Inuit residents, at least 16 years of age, are eligible to participate in the harvest survey. Harvest calendars are provided on a household basis, rather than an individual basis, to simplify data entry and collection, and reflect household hunting patterns. The harvest calendar is attractive and consists of local photographs of wildlife and Baker Lake residents. See 2025 calendar in Appendix A of the HHS (Appendix F). Space is provided for each calendar day where harvest details can be documented. A map is provided at the end of the calendar that delineates a 4 km^2 UTM grid within the Baker Lake and Meadowbank Complex areas. Each grid has a unique code to facilitate recording of information. When calendars are issued, participants or participating households are encouraged to write harvest details (e.g., number of animals, sex, age, and location [i.e., grid code]) for the appropriate date on the calendar.

Participants were interviewed in person three times during the year (i.e., June 2024, November 2024, and January 2025) by the harvest study coordinator. During the January 2025 interviews, remaining data from 2024 were collected. The purpose of the interviews is to ensure all harvest data are recorded on the calendars and to collect incidental information to compliment calendar data, including notable caribou movements, aggregations, and unique observations. Between interview periods, participants were often contacted by phone or social media to encourage recording of harvest data.

Features of the 2024 HHS included: 1) building long-term relationships between participants and researchers; 2) increasing engagement with participants on social media platforms such as Facebook and Instagram; 3) continuing incentives for participating in the study (e.g., gas vouchers and prizes); and 4) special prizes for the 20 longest standing participants

10.4 Results

Results of the 2024 HHS are summarized below. Additional information such as distribution maps and data comparisons across all years of the HHS are presented in Appendix F.

Hunter Harvest Study Results

- The HHS included 77 participants by the end of 2024, which is higher than the participants in 2023, 2022, and 2021 (i.e., 75, 59, and 55 respectively).
- Given the historical and current number of hunters in Baker Lake, an estimate of 300 to 350 active hunters was used in the 2024 analysis.
- Of the 77 HHS participants in 2024, caribou harvest data was collected from 64 participants, which represents approximately 18% to 21% of total hunters in the community.
- The distribution of hunting is highly concentrated in the vicinity of the Hamlet of Baker Lake and along the AWAR to approximately KM 85.
- The 2024 HHS data indicated that 48% of reported harvest occurred within 5 km of the AWAR, and 82% occurred within the Meadowbank RSA. Threshold levels of 20% set for monitoring the effects of the Meadowbank Mine development on the distribution of caribou harvest within the RSA were not exceeded.

- In 2024, no caribou were harvested within 5 km of the WTHR. Overall harvest numbers were too low to determine whether harvests have increased following construction of the WTHR.
- Within the Whale Tail RSA (note – overlaps with the Meadowbank RSA), a total of 33 harvests were reported in 2024. Given the low numbers of reported harvests close to the WTHR and the lack of public access to the WTHR, it is unlikely that the presence of the road has resulted in increased harvest.
- In 2024, a total of 820 caribou were reported as being harvested by 64 participants in the Baker Lake HHS, which includes harvests in the Meadowbank and Whale Tail study areas.
- Given that the 64 hunters represent an estimated 18% to 21% of the Baker Lake hunting community, the total estimated number of caribou harvested in 2024 in the Baker Lake community ranged from 3,905 to 4,556 animals.
- Based on the NWMB (2004) and inclusive Baker Lake HHS results (2007 to 2015; 2019 to 2024), highest caribou harvests have occurred August and December, followed by a smaller peak between March and May.
- The similar pattern between the studies indicates that seasonal hunting preferences have not changed markedly in the last decade.
- Other harvested mammals included 1 American marten (*Martes americana*), 8 Arctic fox, 5 Arctic ground squirrel, 10 Arctic hare,143 Arctic wolves, 1 ermine, 2 grizzly bear, and 15 wolverines. There were no muskox, or red fox reported as harvested in 2024. Several bird species were harvested in 2024 with the most common species being ptarmigan sp. (*Lagopus* sp.).
- For the third year in the HHS, marine mammals (4 Ringed Seal (*Pusa hispida*)) were reported as being harvested by Baker Lake hunters, but all were harvested outside the HHS boundaries.

Creel Survey Results

- The number of fishermen reporting successful fishing trips in 2024 was 34, which is higher than the average of 25 fisherman from 2007 to 2015 and 2019 to 2023 (14 years). The highest numbers of fisherman reporting success in 2024 were in May and June period, which is consistent with seasonal fishing patterns in other years.
- Fishing trips, regardless of success rate, did not generally occur beyond the immediate areas of Baker Lake, Whitehills Lake, and along the lower AWAR. The average number of fish harvested per fisherman in each month was highest in November with lower averages in the summer months.
- Lake trout, Lake Whitefish and Arctic char were the most common species caught by fisherman.

10.5 Accuracy of Impact Predictions

A summary of the impact predictions identified in the TEMP Version 7 (Agnico Eagle 2019) that are evaluated by the HHS is presented in Table 10-1.

Table 10-1: Accuracy of Impact Predictions–- Baker Lake Hunter Harvest Study

Potential Effect	Threshold	Threshold Exceeded (2023)	Adaptive Management Implemented	Status
AWAR				
Hunting by Baker Lake Residents	The AWAR will not result in significant changes in the spatial distribution, seasonal pattern, or harvest levels of caribou by Baker Lake hunters. Changes will not exceed 20% of historical harvest activities within the RSA	NO (82% of harvest in RSA in 2024 compared to 67% baseline; average of 75% of harvest within RSA since 2007)	Future discussion with HTO and GN representatives required to identify management options	Hunter Harvest Study (including the Creel Survey)
WTHR				
Hunting by Baker Lake Residents	No change in harvest	NO (no caribou harvest recorded within 5 km of the WTHR)	None required. Access by hunters is restricted in the growing season and very limited hunting occurs in the winter.	Hunter Harvest Study Satellite-Collaring Program

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road, RSA = Regional Study Area, HTO = Hunters and Trappers Organization, GN = Government of Nunavut.

10.6 Management Recommendations

The Baker Lake HHS and Creel Survey should be continued on an annual basis to monitor the hunting and fishing patterns of Baker Lake residents, and the potential effects of the Meadowbank Complex. Meetings with participants every four months (three times/year) in 2025 are particularly important in maintaining contact, building relationships, expanding the study, and collecting good harvest data. Participation rates can be maintained by continuing to use social media platforms such as Facebook and Instagram, expanding connections on these platforms, ensuring that all participants are visited during the three scheduled field visits, and continuing with distribution of the well-received year-end prizes while in the community. In addition, an effort should be made to continue recruiting new, and particularly young, hunters for the HHS.

11.0 INTEGRATED CARIBOU MONITORING RESULTS

Various caribou monitoring programs have been developed (Section 2.0 to Section 10.0) to understand and manage Mine-related effects on caribou. This section summarizes caribou monitoring data collected in 2024 and lists potential Mine-related effects.

11.1 Integrated Results

Table 11-1 summarizes results from each of the nine programs that monitored caribou activity and responses to Mine-related activity in 2024, while Table 11-2 summarizes potential Mine-related effects on caribou in 2024.

Table 11-1: Summary of Caribou Monitoring Activities and Management Responses in 2024

Monitoring Program	Summary of 2024 Monitoring Results	Summary of 2024 Management Responses
Caribou Management Decision Tree (Section 2.0)	Decision tree used when caribou were close to Project facilities as outlined in the TEMP version 7.	Decision tree process uses data from the road, Mine site, viewshed surveys, and satellite collaring to determine the scale of caribou monitoring and management required.
Road Surveys (Section 3.0)	A total of 277 surveys completed on the AWAR, and 194 on the WTHR. The highest caribou numbers were observed along the AWAR in September and November. The highest caribou numbers were observed along the WTHR in April.	The AWAR was fully closed (24-hour closure) on 63 days, closed for less than 24 hours on 81 days, and had speed restrictions applied for 83 days. In total the AWAR was closed for 2,396 hours. The WTHR was fully closed (24-hour closure) on 24 days, partially closed (less than 24-hour closure) on 40 days and had speed restrictions applied for 77 days. The WTHR was closed for 888 hours during 2024 (Appendix B).
Pits and Mine Site Ground Surveys (Section 4.0)	Mine site surveys conducted on a weekly basis at minimum, and incidental observations recorded. Mine and pit surveys occurred 86 times at Meadowbank and 87 times at Whale Tail during 2024. Caribou sightings at Meadowbank were highest in April and muskox sightings were highest in December. At the Whale Tail, caribou observations were highest in August and muskox sightings were highest in October.	Deterrent actions were implemented to keep wildlife, including caribou safe from site hazards. Road crossing data thoroughly collected throughout the year to support mitigation decisions. There were no observations from Mine and Pit surveys that resulted in mitigation (Appendix A).
Wildlife Habitat Monitoring (Section 5.0)	A 69 ha, or 9% change in footprint at the Whale Tail site and WTHR occurred between the assessment in 2021 and 2024. There was no change in the footprint at Meadowbank Mine between 2021 and 2024. A 4.5 ha, or 2% increase in footprint occurred along the AWAR between 2021 and 2024. The next comprehensive analysis is scheduled for 2027.	Not Applicable.
Caribou Satellite-Collaring Program (Section 6.0)	Agnico Eagle intends to continue collaboration with the GN DoE caribou satellite-collaring program. The collar data analysis completed in 2024 included 2024 data from four caribou herds.	Daily satellite collar maps still received during sensitive seasons and used to assess need for increased monitoring. Further exploratory analysis could aim to determine spring and fall migration timing differences between herds, where sample size allows.

Table 11-1: Summary of Caribou Monitoring Activities and Management Responses in 2024

Monitoring Program	Summary of 2024 Monitoring Results	Summary of 2024 Management Responses
Viewshed Surveys (Section 7.0)	A total of 1,467 viewshed surveys were conducted over 99 days in 2024. Of the 1,467 viewshed surveys, 82 surveys (6%) had caribou sightings, and a total of 1,945 caribou were reported. Survey efforts were conducted between 1 January and 31 December, with the highest survey effort occurring in the fall (34.5%).	Although more viewshed surveys were conducted in 2024 than in 2023, fewer caribou were observed. The majority of monitoring along the WTHR was conducted using the standard road surveys. Based on discussion from the fall 2024 TAG meeting (meeting #21, Agnico Eagle 2024e), viewshed surveys will be discontinued going forward.
Remote Camera (Section 8.0)	Remote cameras were deployed at ten locations along the WTHR. Caribou were detected at nine out of ten locations, and road crossings were identified at six out of ten locations.	No management response based on remote camera program in 2024.
Blast Monitoring (Section 9.0)	Caribou monitoring was conducted prior to blasts throughout 2024. Caribou behavioural monitoring occurred during seven blasts in 2024.	No caribou or Muskox groups exceeded GST within the setback distances during blasting. No blasts were cancelled or postponed in the vicinity of the Whale Tail Mine.
Hunter Harvest Study (Section 10.0)	A total of 820 caribou were reported as being harvested by 64 participants in the Baker Lake HHS. The data indicated that 48% of reported harvest occurred within 5 km of the AWAR, and 82% occurred within the Meadowbank RSA. In 2024, no caribou were harvested within 5 km of the WTHR.	The Hunter Harvest Study results support that harvest was less than threshold. Management actions are not required.

AWAR = All-Weather Access Road, GN DoE = Government on Nunavut Department of Environment, GST = Group Size Threshold, HHS = Hunter Harvest Study, RSA = Regional Study Area, WTHR = Whale Tail Haul Road.

Table 11-2: Summary of Mine-related Effects on Caribou in 2024

Monitoring Program	Potential Effect	Threshold	Threshold Exceeded (2024)	Adaptive Management Implemented
Caribou Management Decision Tree (Section 2.0)	Sensory Disturbance	No threshold but Decisions Trees followed when caribou are seen near Mine facilities	Not Applicable	YES. Multiple road closures and notices. Use of Decision Tree for Management and Monitoring.
Road Surveys (Section 3.0)	Sensory Disturbance	No threshold. Decisions Trees followed when caribou are seen near Mine facilities.	Not Applicable	YES. Multiple road closures and notices, good engagement of Wildlife Log by site staff. Use of Decision Trees for Management and Monitoring.
	Project-related Mortality	Caribou or muskoxen will not be killed or injured by vehicle collisions. Threshold level of mortality is two individuals per year.	NO	There was one caribou mortality that took place on the AWAR on 05 January 2024.
Pits and Mine Site Ground Surveys (Section 4.0)	Sensory Disturbance	No threshold. Decisions Trees followed when caribou are seen near Mine facilities.	Not Applicable	YES. Deterrent actions were used to keep wildlife, including caribou safe from site hazards. Use of Decision Tree for Management and Monitoring.
Wildlife Habitat Monitoring (Section 5.0)	Habitat Loss	10% above total loss of high suitability habitat.	Not Applicable	Not Applicable.
Caribou Satellite-Collaring Program (Section 6.0)	Sensory Disturbance	No threshold. Decisions Trees followed when caribou are seen near Mine facilities.	Not Applicable	YES. Multiple road closures and notices. Use of Decision Tree for management and monitoring.
Viewshed Surveys (Section 7.0)	Sensory Disturbance	No threshold. Decisions Trees followed when caribou are seen near Mine facilities.	Not Applicable	YES. Multiple road closures and notices. Use of Decision Tree for Management and Monitoring.
Remote Camera (Section 8.0)	Sensory Disturbance	No threshold.	Not Applicable	Not Applicable.
Blast Monitoring (Section 9.0)	Sensory Disturbance	NPC-119 criteria. Monitoring is continuous, but with increasing intensity as caribou approach the blasting site.	NO	YES. No caribou or muskox groups exceeded GST thresholds within setback distances. Use of Decision Tree for management and monitoring.
Hunter Harvest Study (Section 10.0)	Hunting by Baker Lake Residents	The AWAR will not result in significant changes in the spatial distribution, seasonal pattern, or harvest levels of caribou kills by Baker Lake hunters. Changes will not exceed 20% of historical harvest activities within the RSA.	NO	NO. Future discussion with HTO and GN representatives required to identify management options.
		No change in harvest along the WTHR.	NO	

AWAR = All-Weather Access Road, GN = Government of Nunavut, NPC = Noise Pollution Control, RSA = Regional Study Area, WTHR = Whale Tail Haul Road.

12.0 PREDATORY MAMMAL DEN MONITORING

Predatory mammals, representing a valued ecosystem component (VEC), occur and are known to den in the vicinity of the Meadowbank and Whale Tail Mine facilities. Sensory disturbances near active dens such as blasting, vehicles and, most significantly, ground personnel, may negatively impact denning success by inducing stress responses in the adult mammals, which can result in den abandonment.

Predatory mammal den monitoring is applicable to four species: wolf (natal dens), grizzly bear (natal/overwintering dens), Arctic fox (natal dens), and wolverine (natal dens).

12.1 Objectives

The purpose of the predatory mammal den monitoring program is to identify and monitor active dens in close proximity to mining operations in order to protect any detected dens from disturbance.

12.2 Methods

Data will be collected on predatory mammal abundance and behaviour during ground surveys, vehicle surveys, viewshed surveys, and through incidental observations. Active den sites identified during baseline studies will also be monitored. If a wildlife technician suspects or confirms that an active den is present within the active footprint and vicinity of Project mines facilities or roads, a den management plan will be prepared. The plan will include consultation with the GN with respect to obligations under *The Wildlife Act*, SNU 2003, c. 26. Ground personnel and vehicle access will be restricted in the vicinity of the den as needed to minimize disturbances at the den. The den management plan outlines a monitoring schedule (dependent on seasonal timing) and will inform further mitigation strategies as required. See Figure 13 and Appendix G of the 2019 TEMP version 7 (Agnico Eagle 2019) for den management and protection plan components.

12.3 Results

Monitoring of predatory mammal dens was conducted informally in 2024 through observations recorded during other monitoring programs. Potential effects due to Project-related activities were not identified to trigger monitoring of predatory mammal dens. No predatory mammal dens were observed or monitored in 2024.

12.4 Accuracy of Impact Predictions

A summary of the impact predictions identified in the TEMP version 7 (Agnico Eagle 2019) is provided in Table 12-1; however, no impacts to denning predators were observed in 2024.

Table 12-1: Accuracy of Impact Predictions–- Disturbance to Denning Predatory Mammals for the Meadowbank and Whale Tail Sites

Potential Effect	Threshold	Threshold Exceeded	Adaptive Management Implemented	Monitoring Methods
Disturbance to Denning Predators	Predatory mammal den failures will not be caused by Mine-related activities. Threshold is one den failure per year.	NO	NO	Road Surveys, daily and weekly systematic pit and Mine site ground surveys, viewshed, incidentals and vehicle encounter.

12.5 Management Recommendations

When an active den site is identified in close proximity to Project facilities, a den management plan should be developed that outlines a monitoring schedule and appropriate mitigation strategies.

13.0 RAPTOR NEST MONITORING

13.1 Overview

The raptor (e.g., hawks, eagles, falcons and owls) nest monitoring program is designed to determine Project-related effects, and the success of mitigation strategies to prevent disturbance to nesting raptors. Within the Meadowbank LSA and AWAR LSA, peregrine falcons have previously nested in quarries along the AWAR, the Portage Pit, and Goose Pit. Monitoring of peregrine falcon nests in quarries along the AWAR has been conducted since 2009. The Portage, Goose, Vault, Whale Tail, and IVR Pits are inspected for peregrine falcon activity daily prior to and during the nesting season and managed under the Peregrine Falcon Management and Protection Plan (Appendix E, Agnico Eagle 2019).

Monitoring in 2024 included surveys for nests associated with pits and quarries along the AWAR and WTHR. Raptor activity and potential nest locations were also noted on other surveys including road surveys, viewshed surveys, freshet monitoring, and on-site environmental monitoring. In addition, a research program was conducted by Arctic Raptors in 2024, to determine the relationship between nest success and Mine activity (Appendix G).

13.2 Objectives

The objectives of the raptor nest survey monitoring program are to monitor disturbance to nesting raptors, and Project-related mortality to raptors. Nest management plans are developed for nests in proximity to the Project. One mortality, and one nest failure are thresholds for the Project.

13.3 Duration

Raptor nest monitoring will continue throughout operation and closure stages of the Mine to evaluate if mitigation measures to prevent disturbance to nesting raptors are successful.

13.4 Methods

13.4.1 Nest Monitoring

Raptor nests within 1.5 km of the active footprint and Project facilities require monitoring from 1 May to 15 September. Daily monitoring is required for nests within the active footprint, or within 500 m of Project facilities (i.e., the area of concern; Agnico Eagle 2019), and weekly monitoring is required for nests outside the area of concern. Nest management plans are developed as required, in consultation with subject matter experts and the GN, which include establishment of no-disturbance buffers in accordance with BC Guidelines for Raptor Conservation or TAG recommendations. If raptor nesting activity is detected in the Portage, Goose, Whale Tail, and IVR Pits, or other site infrastructure, the Environment Department is notified, and these pits are then inspected daily for nesting activity from 25 May to 1 July. Management and mitigation approaches for peregrine falcon nests in proximity to pits and facilities are outlined in the Peregrine Falcon Management and Protection Plan on the Meadowbank Gold Project Site (Appendix E, Agnico Eagle 2019). Raptor activity is also noted on other surveys including pit and Mine site inspections, road surveys, and viewshed surveys.

Raptor nest monitoring in 2024 included monitoring of raptor nests in quarries along the AWAR and WTHR. Peregrine falcons have nested in quarries along the AWAR since 2009, and surveys of these quarries have been performed since 2010. Quarries along the WTHR were checked regularly for raptor nesting evidence between 22 May and 24 August in 2024 (Table 13-1). Quarries along the AWAR (Table 13-1) were visited on an approximately weekly basis between 22 May and 23 August in 2024. Raptor activity and potential nest locations were also noted on other surveys including road surveys, viewshed surveys, freshet monitoring, and on-site environmental monitoring. Surveys in pits or other areas were conducted when raptors were observed during

Mine site inspections or incidental observations. In addition to monitoring completed by Agnico Eagle technicians, Arctic Raptors completed ground-based surveys, and two helicopter surveys for nesting raptors from 22 to 26 May and 07 to 10 August 2024. Surveys were focused on nesting habitat along project-related infrastructure including the AWAR and WTHR (Appendix G).

Nest sites are monitored using non-disruptive techniques, which include monitoring from vehicles within the quarry or from the road, to ensure that active nests are not approached by Mine personnel. Presence of aggressive adults, eggs, and chicks are used to identify active nests. To minimize direct disturbance to nesting birds and as per recommendations, intensive monitoring by approaching nests by foot, is not conducted. Deterrents were applied to two known sites to harbour raptors in 2024 to discourage raptor nesting.

13.4.2 Nest Occupancy Analysis

Arctic Raptors analyzed data from raptor nest surveys performed in years 2015 to 2017, 2019, and 2021 to 2024 at 107 locations considered to be raptor nesting habitat. Occupancy modelling was used to determine nest occupancy across years for peregrine falcons (88 nest sites), rough-legged hawks (35 nest sites), and gyrfalcon (*Falco rusticolus*; 18 nest sites). Annual occupancy probabilities were used to determine average rate of change in occupancy (lambda [λ]) for peregrine falcons and rough-legged hawks. A lambda value greater than one indicates population increase, a lambda value less than one indicates population decrease and a lambda value approximately equal to one indicates stability. The number of young that hatched at each nest were used to estimate reproductive success. Full methods for the analysis are included in Appendix G (Arctic Raptors 2025).

13.5 Results

13.5.1 Nest Monitoring

Eight peregrine falcon nests were documented in Quarries 2, 3, 7, 9, 16, 18, 21, and 22 in 2024 (Table 13-1; Figure 13-1). Nests have previously been identified in both these quarries (Table 13-1). No raptor nesting evidence was observed in quarries along the WTHR in 2024 (Quarries 10.5, 17, 26, 30, 35, 50, and 52; Table 13-1). No other raptor nests were identified during pit checks or incidentally during other surveys in 2024.

A summary of observations made at the peregrine falcon nests along the AWAR in 2024 is detailed in Table 13-2. Raptor nest management plans were not developed at the active nest sites, as Mine-related activity was already restricted within the quarries, with the only disturbance being traffic on the nearby AWAR. Intensive monitoring, which would include approaching nests by foot, was not conducted. Nest locations are not publicized to prevent inadvertent disturbance by curious Mine employees.

Table 13-1: Record of Peregrine Falcon Nesting from 2009 and 2024

Location	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Comments (2024)
Quarry 1	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 2	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No	No	No	Yes	No	**Yes**	**Yes**	**Yes**	No	**Yes**	Two adults and 4 eggs.
Quarry 3	No	**Yes**	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No	**Yes**	No	**Yes**	**Yes**	Six adults and 4 chicks.
Quarry 4	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 5	No	No	No	No	No	No	No	No	No	No	No	No	**Yes**	No	No	No	No falcons observed.
Quarry 6	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 7	No	No	No	No	No	No	No	**Yes**	**Yes**	No	No	**Yes**	**Yes**	No	No	**Yes**	Gyrfalcon occupying nest, four eggs observed.
Quarry 8	No	No	No	No	No	No	No	No	**Yes**	No	No	No	No	**Yes**	**Yes**	No	No falcons observed.
Quarry 9	No	No	No	No	No	No	No	No	No	No	**Yes**	**Yes**	**Yes**	No	No	**Yes**	Three adults, four eggs, and two chicks observed.
Quarry 10	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 11	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 12	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 13	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 14	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 15	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Quarry 16	No	No	No	No	No	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No	No	**Yes**	Three adults and two chicks observed.
Quarry 17	No	No	No	No	No	No	No	No	**Yes**	No	No	No	No	No	No	No	No falcons observed.
Quarry 18	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**	No	**Yes**	Five adults and three chicks observed.
Quarry 19	**Yes**	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No	**Yes**	No	No	No	No	No falcons observed.
Quarry 20	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Two falcons observed.
Quarry 21	No	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	No	**Yes**	No	**Yes**	Two adults and 4 eggs.
Quarry 22	No	No	No	No	No	No	No	No	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**	No	**Yes**	Two adults and no eggs.
Quarry 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	No falcons observed.
Quarry 26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	No falcons observed.
Quarry 30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	Two adults observed.
Quarry 35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	No falcons observed.
Quarry 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	No falcons observed.
Quarry 52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	No falcons observed.
Portage Pit	No	No	No	**Yes**	**Yes**	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Vault Pit	N/A	N/A	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	No falcons observed.
Goose Pit	N/A	N/A	No	No	No	No	No	**Yes**	No	No	No	No	No	No	No	No	No falcons observed.
Whale Tail Pit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No	No	No falcons observed.
IVR Pit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No	No	No falcons observed.

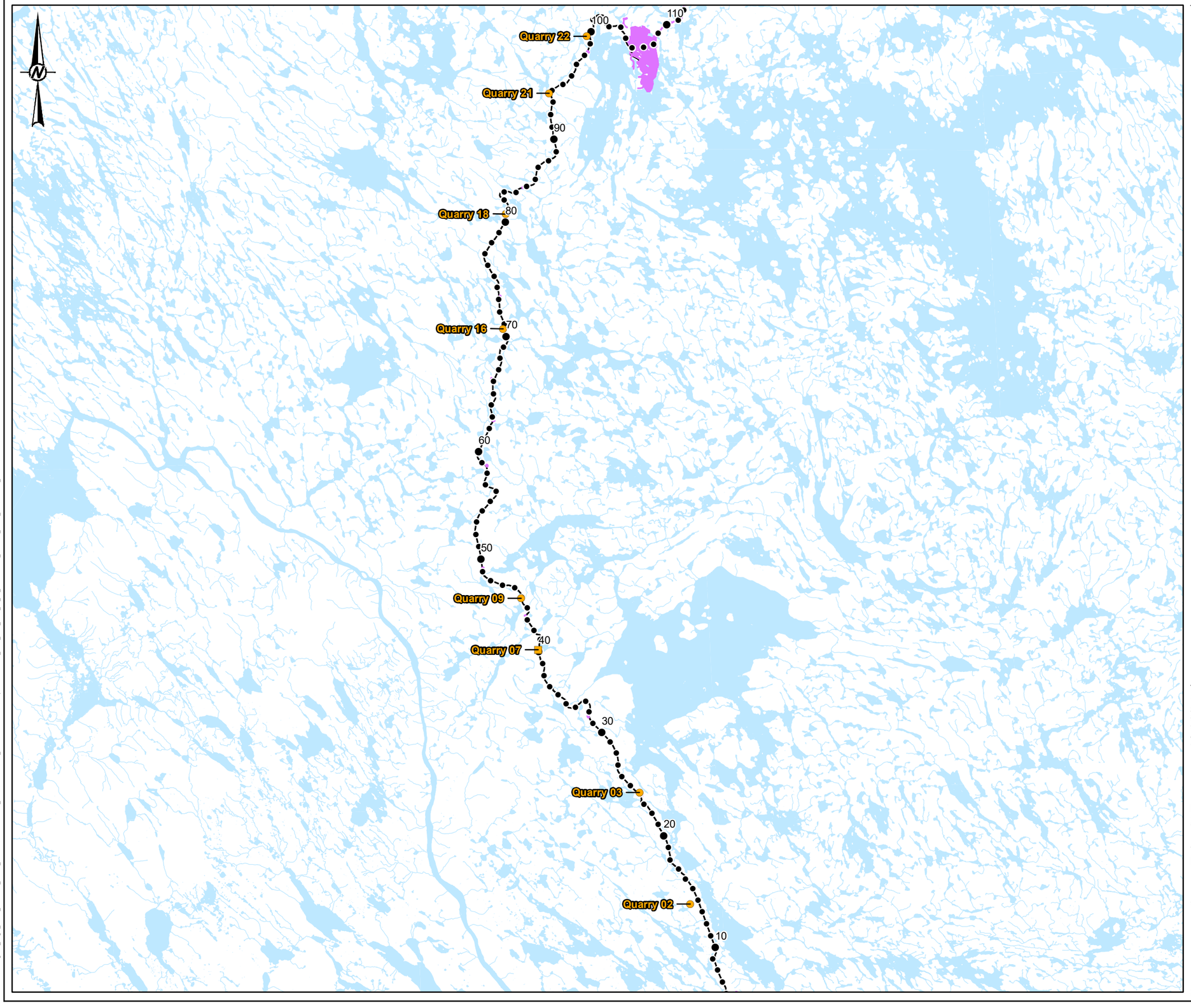
N/A = Not Applicable.

Table 13-2: Peregrine Falcon Nest Monitoring Data, 2024

Date	Quarry 2 (-96.049, 64.424)	Quarry 3 (-96.126, 64.505)	Quarry 7 (-96.284, 64.610)[1]	Quarry 9 (-96.309, 64.647)	Quarry 16 (-96.318, 64.838)	Quarry 18 (-96.307, 64.919)	Quarry 21 (-96.225, 65.004)	Quarry 22 (-96.155, 64.042)
22-May-24	No activity observed	One adult observed	One adult observed	Two adults observed flying and alarming.	No activity observed	No activity observed	One adult observed	No activity observed
23-May-24	Mating pair observed.	Two courting adults observed	Two adults observed flying	Two adults observed perch on the face of the quarry	No activity observed	Two adults perched on a rock face	Two adults observed	Two adults observed flying
07-Jun-24	Mating pair observed.	Two perched adults observed	Two adults observed flying	Two adults observed flying	Two adults observed flying	Two adults protecting nest	Two adults observed	One adult protective over nest
14-Jun-24	One adult and four eggs observed.	Two adults and four eggs.	Two adult Gyrfalcon observed with four eggs.	Two adults and four eggs.	Two adults observed protecting the nest	One adult protecting nest with four eggs	One adult observed and four eggs	Two adults alarming.
21-Jun-24	Two adults and four eggs observed.	One adult and four eggs	Two eggs observed.	One adult and four eggs.	Two adults observed protecting the nest	One falcon observed flying	One adult and 4 eggs	Two adults protecting nest.
02-Aug-24	-	-	-	-	Two adults observed protecting the nest	-	-	No activity observed
08-Aug-24	One adult alarming.	Six adults and four chicks	No activity observed	Three adults and two chicks.	Three adults and two chicks observed.	Five adults and three chicks observed. Two adults alarming.	No activity observed	No activity observed
18-Aug-24	No activity observed	-	-	-	-	-	-	-
23-Aug-24	No activity observed	Three adults protecting the nest.	No activity observed	No activity observed	One adult observed flying	No activity observed	No activity observed	No activity observed

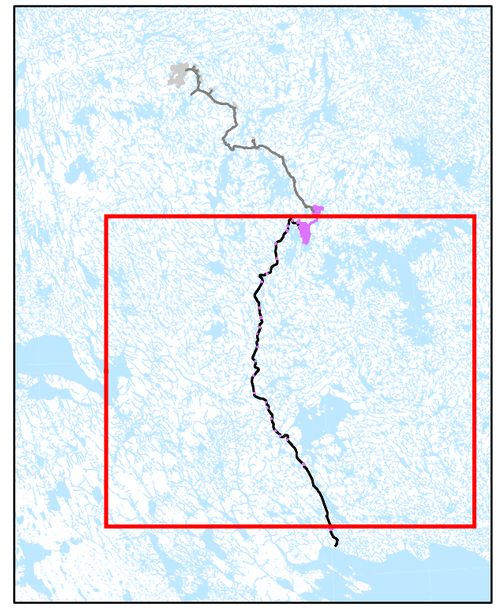
"-" indicates no monitoring event on given day.

[1] Nest occupied by a Gyrfalcon.



LEGEND

- OBSERVED GYR FALCON NEST
- OBSERVED PEREGRINE FALCON NEST
- KILOMETRE MARKER
- WHALE TAIL MINE SITE
- HAUL ROAD
- MEADOWBANK MINE SITE
- ALL WEATHER ACCESS ROAD
- WATERBODY
- WATERCOURSE



0 6 12

1:300,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. ROAD, WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

PEREGRINE FALCON NEST LOCATIONS (2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	13-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_13_01_PEREGRINE_FALCON_NEST_LOCATIONS_2024.mxd PRINTED ON: 2025-03-19 AT: 1:48:03 PM

13.5.2 Nest Occupancy Analysis

Results of the analysis did not indicate project-related effects on rough-legged hawk occupancy and the population is considered stable (λ = 1.06 ± 0.13 [mean ± standard error]). Similarly, there were no indicated project effects on gyrfalcon occupancy (λ = 0.98 ± 0.07) and results indicate the population is stable. Peregrine falcon occupancy is considered to be stable (λ = 0.99 ± 0.04) and observed occupancy was higher closer to disturbance. Full results of the nest occupancy analysis are included in Appendix G (Arctic Raptors 2024).

13.6 Accuracy of Impact Predictions

A summary of the impact predictions identified in the TEMP version 7 (Agnico Eagle 2019) is provided in Table 13-3. Results of the nest occupancy analysis indicate that there has been a marginal decrease in peregrine falcon nest occupancy, but this cannot be strongly correlated to effects from the Project. Results may be related to inconsistent monitoring and lack of statistical power to determine Project-related effects (Appendix G).

Table 13-3: Accuracy of Impact Predictions to Nesting Raptors and Raptor Mortality

Potential Effect	Threshold	Threshold Exceeded (2024)	Adaptive Management Implemented	Monitoring Methods
Disturbance to Nesting Raptors	Raptor nest failures will not be caused by Mine-related activities. Threshold is one nest failure per year.	NO	NO	Active raptor nest monitoring Daily and weekly systematic pit and Mine site ground surveys
Raptor Mortality	One individual	NO	NO	AWAR and WTHR surveys Daily and weekly systematic pit and Mine site ground surveys Incident and vehicle encounter reports

AWAR = All-Weather Access Road, WTHR = Whale Tail Haul Road.

13.7 Management Recommendations

Agnico Eagle will continue to monitor raptor nests in accordance with the TEMP version 7 (Agnico Eagle 2019). This includes annual raptor nest surveys of quarries along the AWAR, WTHR, pits, and waste rock piles; development of nest management plans; and implementation of the Peregrine Falcon Management and Protection Plan, when required. Active nests will be monitored throughout the season to determine nest success or failure. Agnico Eagle will continue to document raptor observations during other programs (e.g., road surveys, viewshed surveys).

Mitigations for raptors that were implemented in 2024 include applying deterrents in the pre-season to two quarries known to harbour raptors (Appendix G; Arctic Raptors 2025).

14.0 WATERBIRD NEST MONITORING

14.1 Overview

The Whale Tail expansion required the construction of two dykes within Whale Tail Lake to divert water from the proposed pit to surrounding lakes and tributaries, resulting in flooding that with potential impacts to migratory birds and their nests. Through collaboration with Trent University and ECCC, research studies were initiated in 2018 to determine the effectiveness of planned mitigation measures for migratory birds during flooding of the Whale Tail South area. This study was conducted over three field seasons in 2018, 2019, and 2021 before, during and after flooding to investigate mitigation options to minimize flooding-related impacts to birds in the Whale Tail South area. The objectives of the study were to:

1) Determine the effectiveness of audio and visual deterrents for prevention of flood-zone nesting.

2) Estimate the number of nests and species composition lost due to flooding.

3) Examine the behavioural response of birds to:

    a) deterrents (e.g., impacts to duration on the nest) and

    b) flooding (determine whether birds re-nested nearby after the flooding events).

Complete methods and results for Objectives 1, 2, and 3a are published and available online in the Trent University thesis "*Assessing and Mitigating the Impacts of Mining-Induced Flooding on Arctic-Nesting Birds*" (Holmes 2022; available through https://batadora.trentu.ca/collection/trent-university-graduate-thesis-collection) and are not revisited here). Refer to previous Wildlife Monitoring Summary Report for more details. A manuscript focussing on the effectiveness of deterrents in reducing territory density and behavioural responses (nest survival, frequency of incubation recesses) (Objectives 1 and 3a) was also published in *Avian Conservation and Ecology* (Holmes et al., 2024; https://ace-eco.org/vol19/iss2/art17/) and attached as Appendix H. Briefly, results indicated that deterrents did not impact territory density overall across the four species studied. Individually, territory density for Horned Larks was reduced in the high-intensity treatment, but this species already had low densities. Deterrents did not reduce nest survival of passerines or shorebirds, nor did they affect the frequency of incubation recesses for incubating Lapland longspur females (the only species for which this was studied). Ultimately, the deterrents tested were not considered effective at preventing birds from using delineated treatment areas.

To address study objective 2, the final measured impact of Whale Tail area flooding on nesting migratory birds was presented in the 2021 Migratory Bird Protection Report (Agnico Eagle 2022a). This calculation was based on nesting densities observed by the research team in the Whale Tail South area in the flood year (2019), along with observed nesting dates and measured change in water levels during nesting. In total, 31 to 50 nests are estimated to have been impacted by flooding using this method. Holmes (2022) provides an estimate of 57 nests, using a slightly more conservative calculation of total predicted flood area. In both cases, the estimated number of impacted nests is fewer than FEIS Addendum predictions (89+ nests).

Methods related to Objective 3b have been previously provided in Appendix A of the 2021 Migratory Bird Protection Report and are not revisited here (Agnico Eagle 2022a). The evidence available to draw conclusions regarding re-nesting in relation to flooding is limited and varied. Holmes (2022) found no statistically significant differences in average nest or territory density between flood zone and adjacent upland control plots prior to flooding (2018) and during flooding (2019), indicating no significant evidence of birds' territory packing into habitats adjacent to flooded areas. Follow-up studies in 2021 (Appendix A of the 2021 Migratory Bird Protection Report; Agnico Eagle 2022a) did indicate average number of nests and average bird density increased from 2019 (during flooding) to 2021 (post-flood) in non-flooded plots, and nest density decreased in previously flooded plots,

supporting a hypothesis of birds moving their nesting sites to areas adjacent to flooding. Further analysis of this data, as presented in the 2022 Migratory Bird Protection Update, examined this behavioural response through individual re-sightings (WSP 2023a). In total six individual Lapland longspur were re-sighted around Whale Tail Lake. Of these, one was re-sighted in the same year (2019) while the others were sighted pre- and post-flood. On average, these birds moved 180 m and moved uphill an average of 4.08 masl. In addition, six individual semipalmated sandpipers nesting around Whale Tail Lake were re-sighted. These birds moved their nesting site an average of 151 m and moved downhill an average of 0.18 masl (two birds moved <5 m from the original nest and the others moved 25 m, 45 m, 348 m, and 483 m). While re-sighting sample sizes are small, these data taken together at least anecdotally support the hypothesis that birds re-nest nearby post-flood.

The complete analysis incorporating this re-sighting data is included in a second Trent University thesis (Bonnett 2024) also available online (https://batadora.trentu.ca/collection/trent-university-graduate-thesis-collection). However, the analysis focuses more broadly on nesting in relation to elevation, not specifically nest movement due to flooding. While additional manuscripts based on the two MSc theses referenced above are planned to be submitted for peer-reviewed publication by the research team, the study objectives have been met and reported under the Migratory Bird Protection Plan is considered complete at this time (Agnico Eagle 2022a).

15.0 BREEDING BIRD MONITORING

15.1 Overview

The breeding bird PRISM (Program for Regional and International Shorebird Monitoring) plot and breeding bird transect monitoring programs were designed to evaluate potential Project-related changes in breeding bird species abundance, richness, and diversity over time. The program is one component of the larger monitoring strategy to evaluate the success of mitigation measures implemented to minimize the amount of vegetation (i.e., bird habitat) removed or degraded (e.g., dustfall) by the Project, and whether certain Mine activities such as the Mine site or AWAR have resulted in reduced or compromised habitat function or effectiveness (i.e., zone of influence) for breeding birds.

For the breeding bird transects, data analysis in 2011 and 2015 indicated that no road-related effects had occurred to date, and thresholds had not been exceeded; therefore, annual transect surveys were permanently suspended after 2015. In 2022, Agnico Eagle reached an agreement with the ECCC to contribute to regional bird monitoring programs by conducting 48 PRISM plots from 2021 to 2031, and to complete Breeding Bird Surveys (BBS) along the AWAR and WTHR when possible and at a minimum of every three years.

15.1.1 Breeding Bird Surveys

Two BBS routes, consisting of 50 stations set every 800 m each, were established by qualified personnel along AWAR and the WTHR in 2022 and were surveyed in 2023 and 2024. A total of 23 bird species were recorded on AWAR and 25 bird species were recorded on WTHR in 2024. Lapland longspur and horned lark (*Eremophila alpestris*) were the most common species observed in both AWAR and WTHR. Detailed descriptions of the routes and station locations are provided in the Meadowbank Complex 2024 Breeding Bird Surveys and PRISM Plots Summary Report (Appendix I).

15.1.2 PRISM Plots

Thirteen PRISM plots were surveyed during five field days in June 2024. In total, 18 bird species were observed in the PRISM plots. There were two mammal species, and six bird species only observed incidentally outside plots. Horned lark and Lapland longspur were the most common species observed during the survey. Full results of the 2024 surveys, as well as sampling methods and locations are available in Appendix I.

15.2 Management Recommendations

Agnico Eagle will continue to survey 48 PRISM plots selected by ECCC over 10 years (2021 to 2031), and completion of AWAR and WTHR Breeding Bird Survey (BBS) routes opportunistically when qualified individuals are on site. At a minimum, the BBS routes will be conducted every three years during the operations, closure and post-closure phases of the Project.

It is recommended that PRISM plots and BBS routes be surveyed in June 2025. The remaining 14 PRISM plots should be completed prior to the Project closure and BBS routes surveyed within the committed three-year cycle.

16.0 NON-NATIVE PLANT SURVEYS

16.1 Overview

This section includes the methods, results, and mitigation measures to minimize the spread of non-native invasive plant species resulting from mining activities. The Government of Nunavut (GN) and Environment and Climate Change Canada defines a non-native species as 'an organism that is not normally found in a region' (CESCC 2010). Additionally, according to Section 91 of *The Wildlife Act*, S.NU. 2003, c 26, invasive species shall not be released into a habitat in which that species does not belong, or never naturally occurred. Any introductions of non-native plant species must be promptly reported to the GN Department of Environment. In 2019, Agnico Eagle initiated a non-native plant monitoring study to assess and monitor the potential introduction of non-native plant species, including weeds or invasive species (Golder 2020d). Subsequent monitoring events occurred in the month of July in each of the years between 2020 to 2024. Surveys will continue to be completed annually as per the Terrestrial Ecosystem Management Plan (TEMP) version 7 (Agnico Eagle 2019). The following section summarizes the findings of the 2024 non-native plant survey.

16.2 Methods

The Canadian Endangered Species Conservation Council (CESCC) lists 17 species not normally found in Nunavut with a potential for becoming established, 14 of which are vascular (non-native) plants to the region (CESCC 2010). These species were included as targets for the non-native plant surveys. Additionally, any species known to be non-native to Nunavut were also included as targets for non-native plant surveys, to meet requirements of Section 91 of *The Wildlife Act*, S.NU. 2003, c 26.

Surveys at the Meadowbank Complex were conducted by a WSP vegetation ecologist who was accompanied by an Agnico site representative to access the survey locations between 18 to 27 July 2024. Surveys were completed at Meadowbank Mine, Whale Tail Mine, the All-Weather Access Road (AWAR), Whale Tail Haul Road (WTHR), and the Baker Lake tank farm.

Species were documented as they were encountered. Non-native plant surveys consisted of targeted surveys focused within high-priority or high-potential areas at the Meadowbank Complex. The high-potential areas were identified as the Project perimeter, highly trafficked areas (e.g., fuel station), areas surrounding buildings, shipping containers, along existing roads/trails or areas of disturbance within the Project area, as well as adjacent to the AWAR and WTHR road. High potential areas also included survey locations from where non-native plants were observed in previous monitoring years. In areas where non-native species were observed, meander surveys were conducted outside of the disturbance footprint to determine if these species had established in the native tundra. Given the length of the AWAR and WTHR, the roads were travelled via vehicle at slow speeds while observers looked for obvious signs of weed infestations along road margins. Periodic stops were undertaken to complete meanders in areas with high potential for weed occurrences (e.g., pull-outs, work areas, road-side quarries, and other areas with disturbed substrates). A global positioning system (GPS) unit was used to collect a track file of the meander route and point locations of surveys conducted.

When non-native or invasive plant species were encountered, the following information was recorded:

- Site ID
- surveyor name
- GPS coordinates
- photos of the occurrence / infestation

- species name
- estimated area of infestation
- estimated number of plants (e.g., <10, 10 to 100, 100 to 1,000, >1,000) of each species
- estimated cover of bare ground
- growth stage (i.e., seedling, in bud, seed set, expired)
- recommended action for each species
- record of any hand pulling completed

16.3 2024 Results

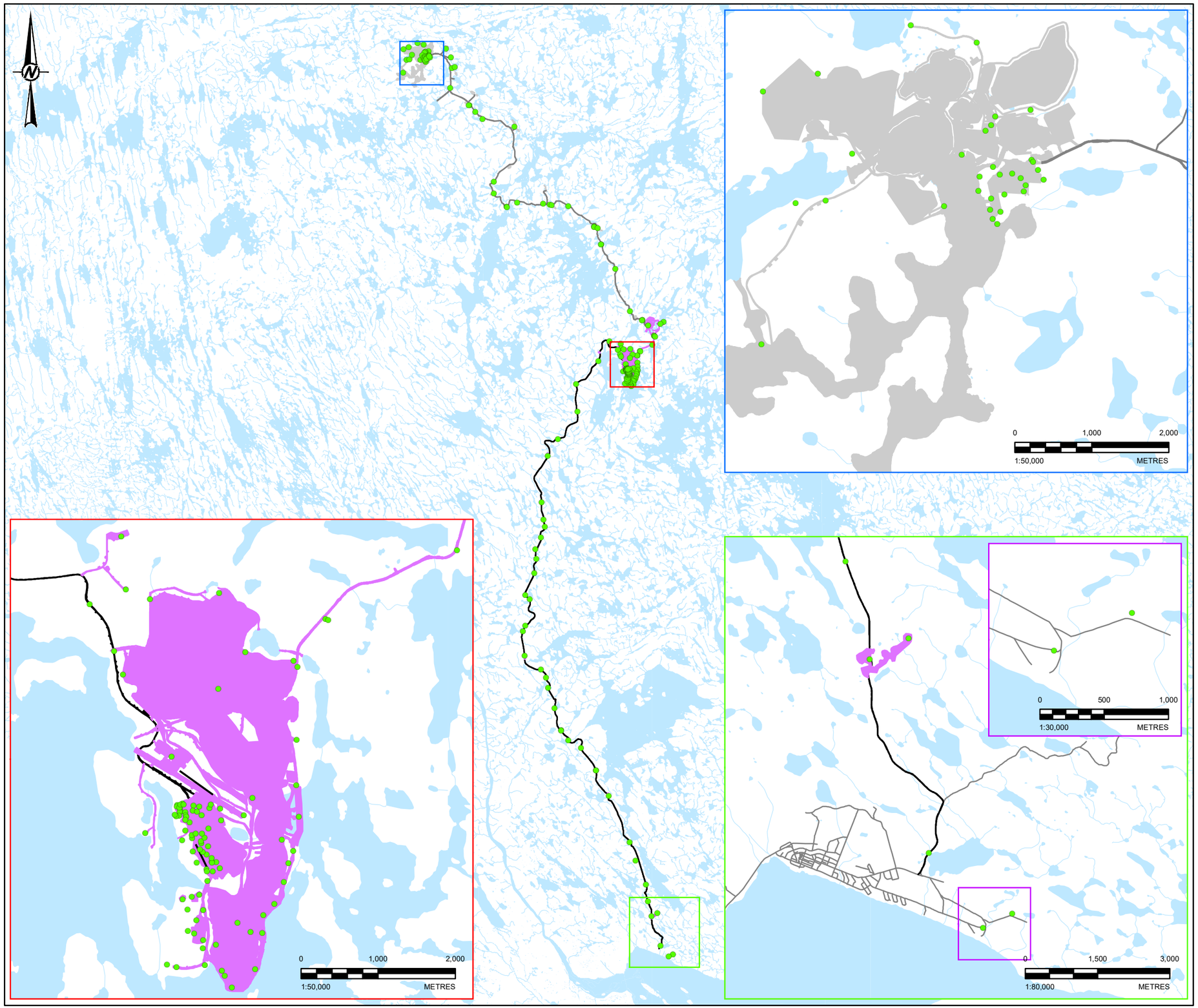
No non-native plants, as identified by the CESCC, were recorded along the AWAR, WTHR, Baker Lake tank farm, Meadowbank Mine Site and Whale Tail sites during the 2024 field surveys.

A total of 201 individual locations, which includes three new added locations in the AWAR quarry were surveyed for non-native plants in 2024 (Table 16-1). Eighteen surveys were completed in the undisturbed tundra around the Meadowbank Mine site, WTHR, and AWAR to survey the presence/absence of non-native species. No non-native plants were found in the undisturbed areas of the tundra that were surveyed.

A summary of the locations where non-native plant surveys were completed is presented in Table 16-1 and Figure 16-1.

Table 16-1: Summary of 2024 Non-Native Plant Survey Effort

Location of survey	Total number of survey locations
AWAR	14
AWAR quarry	24
Baker Lake tank farm	2
Meadowbank Mine site	88
Undisturbed tundra	18
Whale Tail Mine site	31
WTHR	10
WTHR Esker/Quarry	14
Total	**201**



LEGEND

PROJECT DATA

- SURVEY LOCATION - NO NON-NATIVE SPECIES OBSERVED
- TRANSECT
- WHALE TAIL MINE SITE
- HAUL ROAD
- MEADOWBANK MINE SITE
- ALL WEATHER ACCESS ROAD

BASE DATA

- WATERCOURSE
- WATERBODY

0 10 20
1:530,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. ROAD, WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.

COORDINATE SYSTEM: CANADA ALBERS EQUAL AREA CONIC

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

2024 NON-NATIVE PLANT SURVEY LOCATIONS

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	TA
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	16-1

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\9_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_16_01_NON_NATIVE_PLANT_SURVEY_LOCATIONS_2024.mxd PRINTED ON: 2025-03-19 AT: 1:49:21 PM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

16.3.1 Historical Results

From 2019 to 2021, many observations of what was then identified as flixweed (*Descurainia sophia*) were reported (Table 16-2); however, these observations were confirmed in 2022 to be a native species, northern tansy mustard (*Descurainia sophioides*) (WSP 2024). Both flixweed and northern tansy occupy similar habitats including gravel bars, roadsides, waste sites and disturbed soils (Oregon State University 2024) which likely contributed to the previous misidentification of the species. Similarly, previous annual TEMP reports have reported the non-native species, scentless chamomile (*Tripleurospermum inodorum*) (Table 16-2); however, these observations were confirmed in 2022 to be a native species sea mayweed (*Tripleurospermum maritima*). Scentless chamomile and sea mayweed are both found in similar habitats along roadsides and disturbed areas (SSIC 2021), which may have also contributed to their historical misidentification.

In 2020, two non-native species, lamb's quarters (*Chenopodium album)* and alsike clover (*Trifolium hybridum*) were observed; however there have been no observations of these species since 2020 (Table 16-2).

In 2022, no non-native species were observed (Table 16-2).

In 2023, pea plant (*Pisum sativum*) was observed and removed during the survey by hand pulling at the Meadowbank Mine site (Table 16-2).

Table 16-2: Historical Non-Native Plant Survey Results

Year	Number of Survey Locations	Non-Native Plants Species Recorded[(a)]
2019	107	flixweed, scentless chamomile
2020	175	flixweed, scentless chamomile, lamb's quarters, alsike clover
2021	202	flixweed, scentless chamomile
2022	193	none
2023	198	pea plant

(a) Both flixweed and scentless chamomile observed in previous years have been confirmed in 2022 to be native species, northern tansy mustard and sea mayweed respectively (WSP 2024).

16.4 Management Recommendations

The 2024 survey was the sixth consecutive year of non-native species monitoring at the Meadowbank Complex. No non-native species were identified.

Efforts for non-native plant management, including identified non-endemic species, should continue and added diligence should be undertaken with regards to areas of high traffic from equipment. Continued and thorough cleaning of equipment and materials prior to entering the site, per the TEMP version 7, will prevent seed of non-native species from being introduced. Surveys for the 14 non-native plant species identified by CESCC as well as other species not native to Nunavut should continue to be completed annually. Mechanical control such as mowing or hand pulling, as appropriate for the site setting, is recommended for any identified non-native plant species. Chemical herbicide treatments are not recommended to be used at this point as the tundra is a very sensitive ecosystem.

The CESCC (2010) poster of non-native species in Nunavut should continue to be displayed at the Meadowbank Complex to raise staff awareness.

A management plan for non-native plant species employing adaptive management may be implemented if non-native plant species are observed within the Meadowbank Complex area. A non-native plant management plan would describe the methods for the eradication, control and/or minimization of the encroachment of non-native plant species into new areas and outline additional measures such as on-boarding and training in the identification of non-native plant species for the area.

17.0 SPECIAL STUDIES

17.1 Snow Study

17.1.1 Overview

Collared caribou from the Lorillard herd have historically interacted with the All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) during their spring and fall migrations. The following sections focus exclusively on characterizing snow conditions and caribou interaction along the WTHR during spring migration (see Section 3.6 for information on caribou interaction with the AWAR).

The direction of travel for caribou crossing the WTHR has always been from the west to the east in the spring. Snow is removed periodically from the WTHR (and AWAR) to promote safe driving conditions for the transport of Meadowbank Mine staff and supplies, and mined ore between Whale Tail and the Meadowbank Mine sites. Snow is removed or redistributed from the road surface to areas adjacent to the roads. The snow is redistributed in a way to minimize the size of any snow berms formed on the side of the roads (i.e., snow is pushed to the eastern, downwind side of the road). Doing so also reduces the amount of snow management activity required due to snow drifting back onto the WTHR.

Per Whale Tail Expansion Project Commitment 9 from the Technical Advisory Group (TAG) Meeting held in Baker Lake, 11-13 June 2019, Agnico Eagle committed to complete a three-year snow monitoring program as part of the Terrestrial Ecosystem Management Plan (TEMP) that measures snow conditions adjacent to the WTHR. Snow hardness and sinking depth are important for caribou energy expenditure of locomotion, where the combination of softer and deeper snow may inhibit caribou movements (Fancy and White 1987). The goal of the snow monitoring is to determine whether changes to snow resulting from snow removal along the WTHR result in conditions that potentially inhibit caribou movements. The primary questions to be answered by the snow study monitoring were:

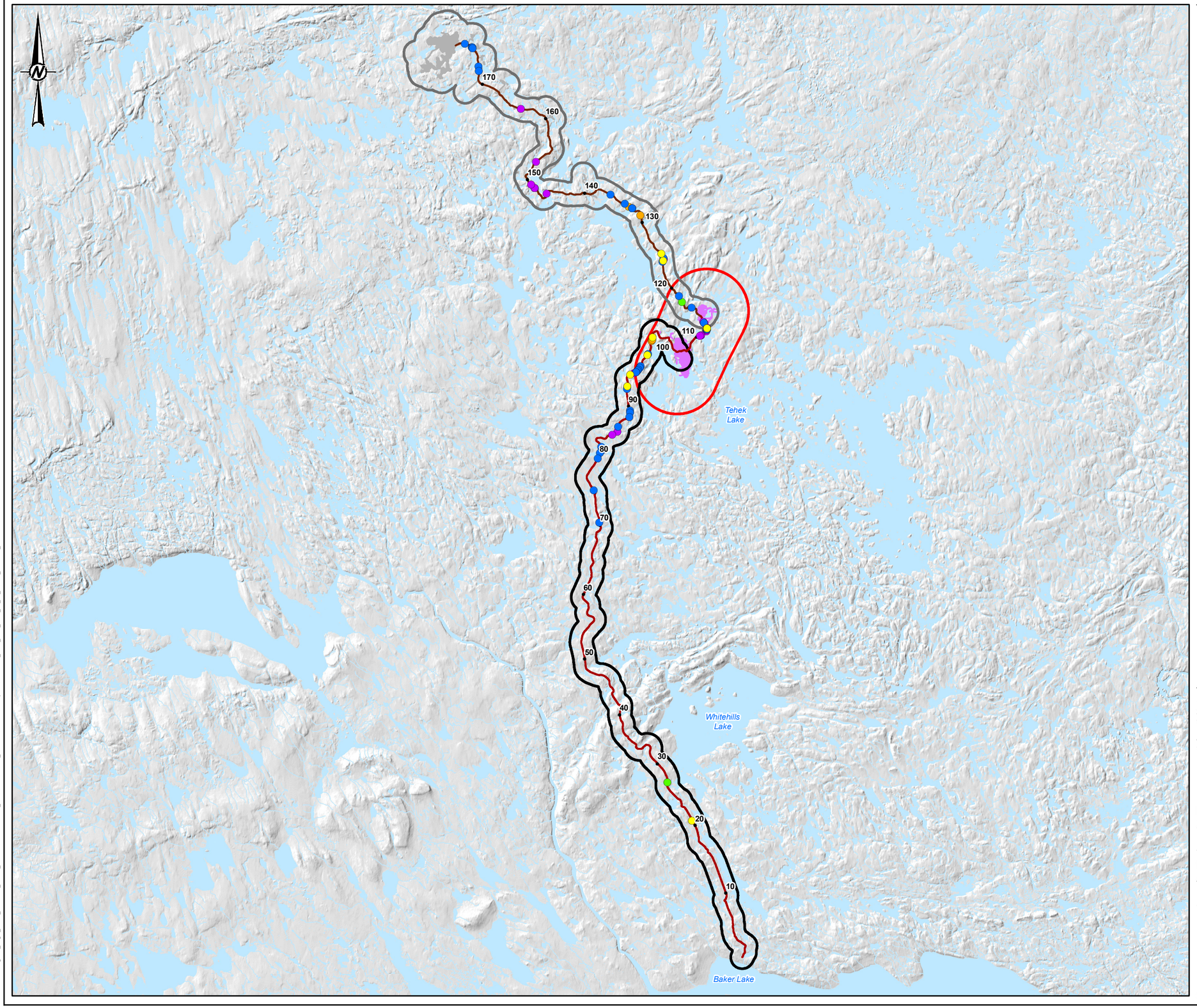
- How do snow conditions within the managed snow area where caribou are crossing the WTHR differ from the snow conditions in adjacent portions of the berm where crossing did not occur?
- How do snow conditions and caribou track characteristics differ between areas within the snow berm and areas beyond the berm where snow conditions have not been altered by snow removal activity?

An annual sample goal of 36 survey locations was originally proposed over three years. Since 2020, a number of challenges have limited the program from achieving this goal including locating fresh caribou tracks. In 2022 a power analysis was conducted using data from 2020-2022 to determine the total number of sampling locations required to detect very small, small and moderate effect sizes for snow hardness (WSP 2023a). A recommendation was made to collect the full suite of snow data for a minimum of 65 sampling locations in order to detect a moderate effect size (e.g., 25%). Snow condition monitoring data collected from 2020-2024 are presented below. These data represent preliminary results of snow condition monitoring since the total number of sampling locations to date with the full suite of snow data is less than 65.

17.1.2 Methods

Seventy-three survey locations have been sampled along the AWAR and WTHR between 2020 and 2024, including five survey locations in May 2020, three locations in April 2021, twenty locations in April and May of 2022, thirty-six locations in April of 2023, and 9 locations in February, March and April of 2024 (Figure 17-1). Of these 73 locations, 45 include the full suite of snow data. Survey locations were chosen opportunistically based on the availability of fresh caribou tracks crossing the road, and while the majority of plots sampled were located along the WTHR, sampling locations along the AWAR were included opportunistically as well. Snow management practices are consistent between the WTHR and AWAR, and any patterns identified for potential effects of snow characteristics on caribou crossing are not expected to differ between the two roads. Surveyors established six plots at each survey location and collected data on the snow depth, snow hardness, caribou track depth, as well as the height, width, and slope of the snow-managed berm that occurred adjacent to the WTHR (Golder 2020e). Snow and caribou track depth were measured using a metre stick while snow hardness was measured using a mechanical dynamometer (i.e., push-pull gauge; Lundmark and Ball 2008). Three plots were established on the upwind side of the WTHR (i.e., the side of the road that the prevailing wind blows from - the west) and three plots were established on the downwind side of the WTHR (i.e., the east side of the road).

The three survey plots on each side of the road included a “use” plot, a “snow-management control” plot and a “non-managed control” plot (Figure 17-2). The use plot occurred within the snow-managed berm in an area where caribou had left tracks while crossing the WTHR. The snow-managed control plot occurred approximately 5 m from the use plot, within the snow-managed berm but in a portion of it that did not contain caribou tracks. Monitoring at caribou use areas and the finer spatial scale of the snow-managed control and use plots was a recommendation by the TAG (KivIA 2019). The non-managed control plot occurred beyond the snow-managed berm and in an area where caribou tracks were present (Figure 17-2).



LEGEND

SNOW SURVEY LOCATION (SURVEY YEAR)

- 2020
- 2021
- 2022
- 2023
- 2024
- KILOMETRE MARKER
- ALL-WEATHER ACCESS ROAD (AWAR)
- WHALE TAIL HAUL ROAD (WTHR)
- AWAR LOCAL STUDY AREA (LSA)
- WTHR LOCAL STUDY AREA (LSA)
- MEADOWBANK LOCAL STUDY AREA (LSA)
- WHALE TAIL MINE SITE
- MEADOWBANK MINE SITE
- WATERCOURSE
- WATERBODY

0 10 20

1:500,000 KILOMETRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. WATERCOURSE AND WATERBODY DATA OBTAINED FROM NATURAL RESOURCES CANADA.
COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
2024 WILDLIFE MONITORING SUMMARY REPORT

TITLE

SNOW SURVEY LOCATIONS ALONG THE ALL-WEATHER ACCESS ROAD AND WHALE TAIL HAUL ROAD (2020-2024)

CONSULTANT

wsp

YYYY-MM-DD	2025-03-19
DESIGNED	JF
PREPARED	CDB
REVIEWED	JF
APPROVED	CDLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0039984.7604	4000/4004	0	17-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: W:\Client\Agnico_Eagle_Mines_Ltd\Whale_Tail\09_PROJECTS\CA0039984_7604\4000\4004\02_PRODUCTION\MXD\Report\CA0039984_7604_4000_4004_17_01_SNOW_SURVEY_LOCATIONS.mxd PRINTED ON: 2025-03-19AT 1:50:32 PM

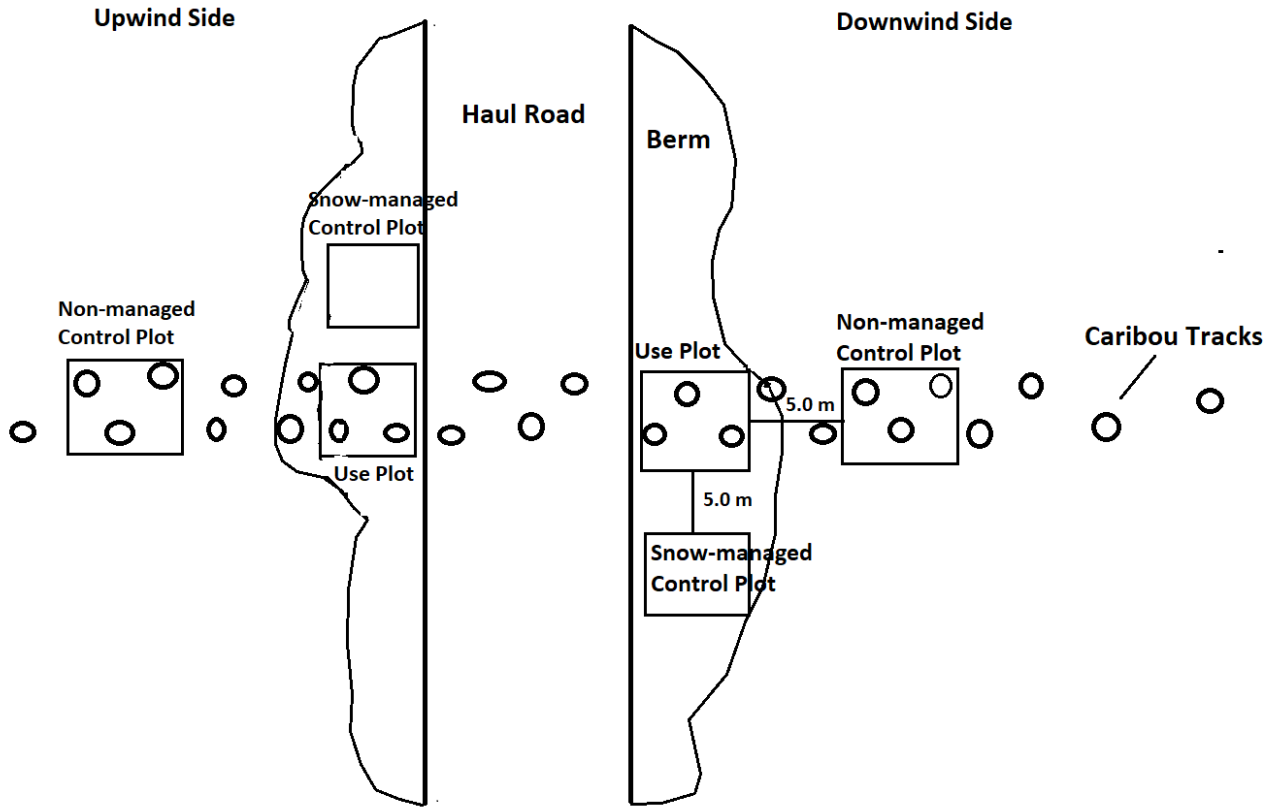


Figure 17-2: Survey Plot Configuration Used During Snow Survey Monitoring Along the Whale Tail Haul Road

Using data from all years, averages and 95% confidence intervals were calculated for each snow metric and plot type. Intervals shown in brackets are 95% confidence intervals unless stated otherwise. T-tests were used to evaluate significant differences in snow metrics on the upwind vs downwind side of the haul road. Analysis of variance tests (ANOVA) were used to evaluate significant differences in snow depth and snow hardness among plot type (Use plot, snow-managed control plot, and non-managed control plot). When significant differences were detected based on the ANOVA ($p < 0.05$), a post-hoc Tukey's test was applied to determine, which plot types were significantly from each other.

17.1.3 Results

A total of nine surveys were completed during the spring migration of 2024. Of the nine survey locations, four were along the WTHR and five were along the AWAR. Workers were patrolling on a regular basis, along the AWAR and the WTHR during the migration season (between 1 April and late May) for signs of caribou crossing tracks adequate for snow sampling measurements. Surveys during 2024 took place during six days, including one day in February, one day in March, and four days in April. Prior to 2023, a full suite of snow data were collected at use plots and snow-managed control plots but not at non-managed control plots, and caribou track data were collected at use plots but not non-managed control plots. Data sheet improvements implemented in 2023 allowed for additional data fields to be collected in 2023 and 2024. Locations surveyed in 2023 onward included the full suite of snow data for each applicable plot type and caribou track data were collected at both use plots and non-managed control plots. Some snow measurements collected prior to 2023 were excluded from 2024 snow summaries due to inconsistencies with reporting units or missing data fields.

Table 17-1 provides a summary of snow metrics recorded at upwind and downwind use plots, snow-managed control plots, and non-managed control plots during 2020, 2021, 2022, 2023 and 2024 survey periods. Considering all plot types sampled, average berm width was greater (t-test, $t = 5.26$, $df = 159.85$, $p < 0.001$) on the downwind (east) than the upwind (west) sides of the haul road, and berm height was higher on the downwind side of the road (t-test, $t = 2.38$, $df = 214.65$, $p = 0.018$) (Figure 17-3). While berm height was higher on the downwind side of the road, average berm height was less than 0.30 m on both sides of the road (downwind berm height, 0.27 [95% CI: 0.17-0.37]; upwind berm height, 0.13 m [0.07-0.19]), and berm width was 3.8-times greater on the downwind (6.14 m [4.53-7.75]) than the upwind side (1.59 m [1.06-2.12]). Slope values on the upwind and downwind sides of the road were not significantly different (t-test, $t = 1.36$, $df = 340.87$, $p = 0.18$) (Table 17-1; Figure 17-3).

Mean snow depth across all plot types was not significantly different (t-test, $t = 0.83$, $df = 357.52$, $p = 0.41$) on the upwind side of the haul road (0.41m [0.37-0.45]) compared to the downwind side of the road (0.44 m [0.4-0.48]) (Table 17-1; Figure 17-3). Average snow depth on both sides of the haul road were significantly different by plot type (ANOVA, $F = 22.75$, $df = 2$, $p < 0.001$) (Table 17-2). Specifically, average snow depth in use plots and snow-managed control plots (i.e., plots within the berm but not used by caribou) were similar (Tukey, $p = 0.99$), but snow depth was greater in non-managed control plots compared to both plot types in the berm area (Tukey, $p < 0.001$) (Figure 17-4). This could potentially be due to the difference in elevation on and off the berm so that when berm snow is spread out the snow may be shallower on the raised road shoulder. Note, the comparison between berm plots (used plots and snow managed control plots) could only be compared with non-managed control plots using 2023 and 2024 data because snow depth was not collected in non-managed control plots prior to 2023.

Snow hardness, as measured using the push-pull gauge, was similar between plots on the upwind side (14 Newtons (N) [13-15]) and the downwind side (15 N [13-16]) of the haul road (t-test, $t = 0.41$, $df = 403.38$, $p = 0.68$) (Table 17-1; Figure 17-3). Considering plots on both the upwind and downwind sides of the haul road, average snow hardness was similar between use plots, snow-managed control plots, and non-managed control plots (ANOVA, $F = 1.97$, $df = 2$, $p = 0.14$) (Table 17-2; Figure 17-5).

Caribou track depth measurements were only collected in use plots during 2020, 2021, and 2022, and in use and non-managed control plots in 2023 and 2024. Mean track depth across plot types was not significantly different (t-test, 0.89, $df = 221.8$, $p = 0.38$) on the upwind side (3.94 cm [3.33-4.55]) compared to the downwind side of the haul road (4.36 m [3.66-5.06]) (Table 17-1; Figure 17-3). Mean track depth was similar between use plots compared to non-managed control plots (t-test, $t = 1.7902$, $df = 182.63$, $p = 0.07$) (Table 17-2; Figure 17-6).

Table 17-1: Summary of Snow Metrics Collected at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road across 2020-2024

Snow Metric	Plot Type	Upwind	Downwind
Snow Berm Height (m) (Average [95% CI])	Use Plot	0.14 [0.06-0.22]	0.29 [0.15-0.43]
	Snow-management Control	0.14 [0.06-0.22]	0.26 [0.12-0.4]
	Non-managed Control	NA	NA
Average Snow Berm Height - All Plots		**0.13 [0.07-0.19]**	**0.27 [0.17-0.37]**
Snow Berm Width (m) (Average [95% CI])	Use Plot	1.59 [0.85-2.33]	6.32 [3.95-8.69]
	Snow-management Control	1.6 [0.85-2.35]	5.97 [3.76-8.18]
	Non-managed Control	NA	NA
Average Snow Berm Width – All Plots		**1.59 [1.06-2.12]**	**6.14 [4.53-7.75]**
Slope (°) (Average [95% CI])	Use Plot	6.88 [4.52-9.24]	7.97 [5.4-10.54]
	Snow-management Control	6.24 [4.08-8.4]	8.1 [5.58-10.62]
	Non-managed Control	5.48 [2.8-8.16]	6.84 [3.62-10.06]
Average Slope - All Plots		**6.28 [4.91-7.65]**	**7.73 [6.16-9.3]**
Snow Depth (m) (Average [95% CI])	Use Plot	0.38 [0.32-0.44]	0.36 [0.3-0.42]
	Snow-management Control	0.36 [0.3-0.42]	0.38 [0.31, 0.45]
	Non-managed Control	0.54 [0.45-0.63]	0.63 [0.54, 0.72]
Average Snow Depth - All Plots		**0.41 [0.37-0.45]**	**0.44 [0.4, 0.48]**
Snow Hardness (N) (Average [95% CI])	Use Plot	12 [10-14]	14 [12-17]
	Snow-management Control	16 [13-19]	15 [13-18]
	Non-managed Control	13 [12-16]	14 [11-16]
Average Snow Hardness - All Plots		**14 [13-15]**	**15 [13- 16]**
Track Depth (cm) (Average [95% CI])	Use Plot	4.36 [3.52-5.2]	4.61 [3.80-5.42]
	Snow-management Control	1.67	4.3
	Non-managed Control	3.34 [2.51-4.17]	3.99 [2.70-5.28]
Average Track Depth - All Plots		**3.94 [3.33-4.55]**	**4.36 [3.66-5.06]**

Note: 95% CI = 95% confidence interval; m = metre; cm = centimetre; N = Newtons of force; NA = not applicable; "-" = data were not collected for this plot type.

Table 17-2: Summary of Statistical Tests on Snow Depth, Snow Hardness, and Track Depth Data Collected at Survey Plots along the Whale Tail Haul Road across 2020-2024

Snow Metric	Plot Type	Sample size	Test-stat	p-value
Snow Depth (m)	Use Plot	147	22.75	<0.001
	Snow-management Control	147		
	Non-managed Control	90		
Snow Hardness (N)	Use Plot	146	1.97	0.14
	Snow-management Control	146		
	Non-managed Control	146		
Track Depth (cm)	Use Plot	137	1.79	0.08
	Non-managed Control	90		

Note: m = metre; cm = centimetre; N = Newtons of force; a = ANOVA test statistic; b = t-test test statistic.

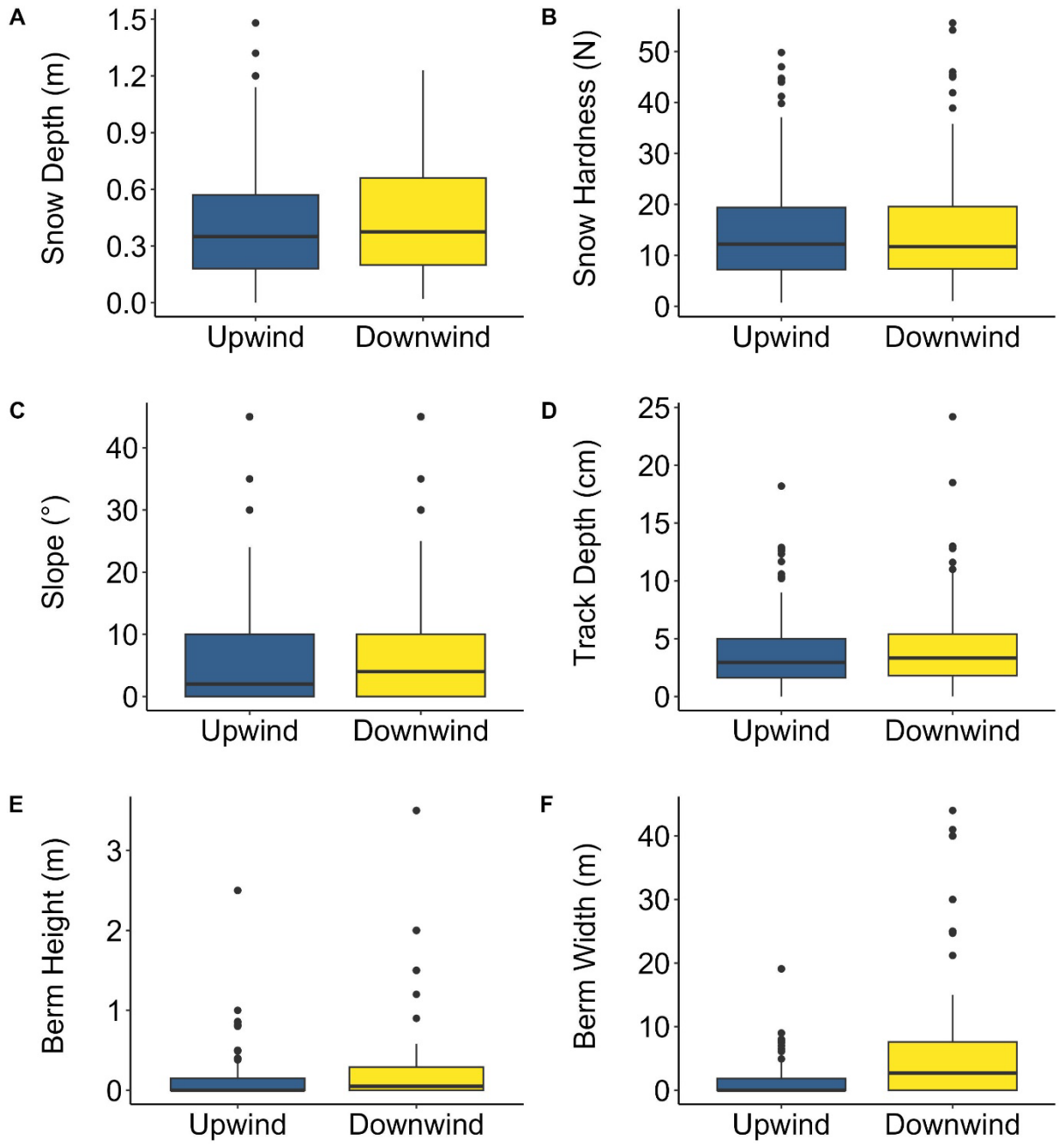


Figure 17-3: A) Snow Depth (m), B) Snow Hardness (N), C) Slope (°), D) Track Depth (cm), E) Berm Height (m), and F) Berm Width (m) at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road.

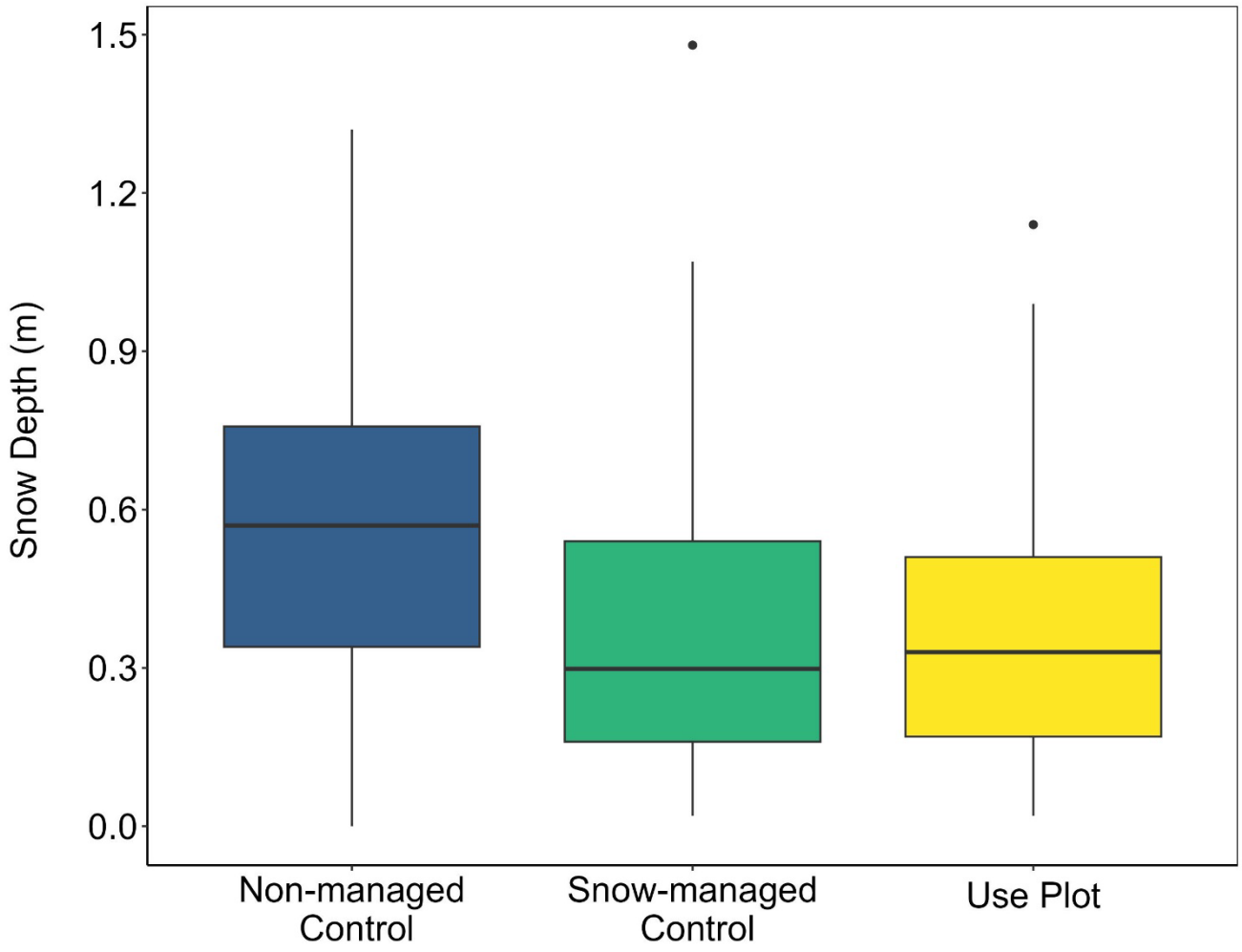


Figure 17-4: Snow Depth (m) at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road.

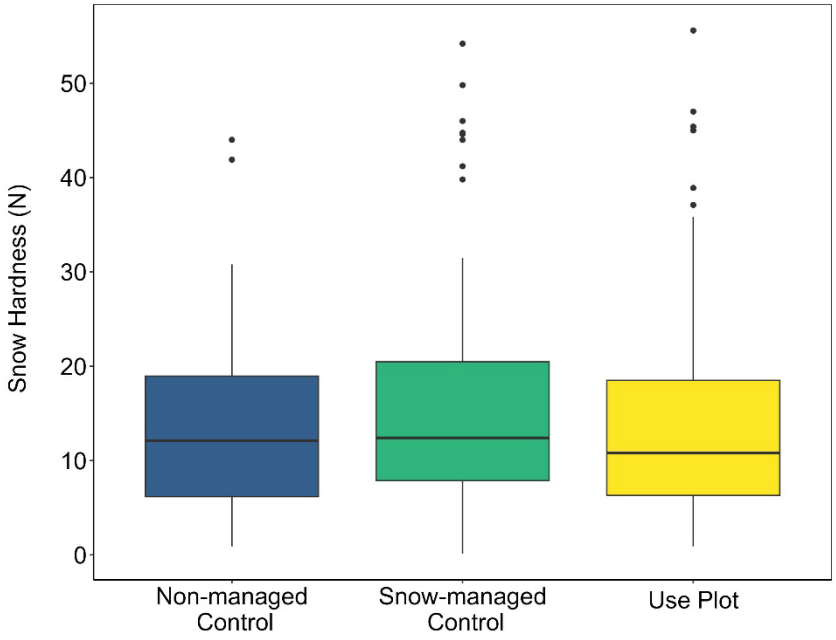


Figure 17-5: Snow Hardness (N) at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road.

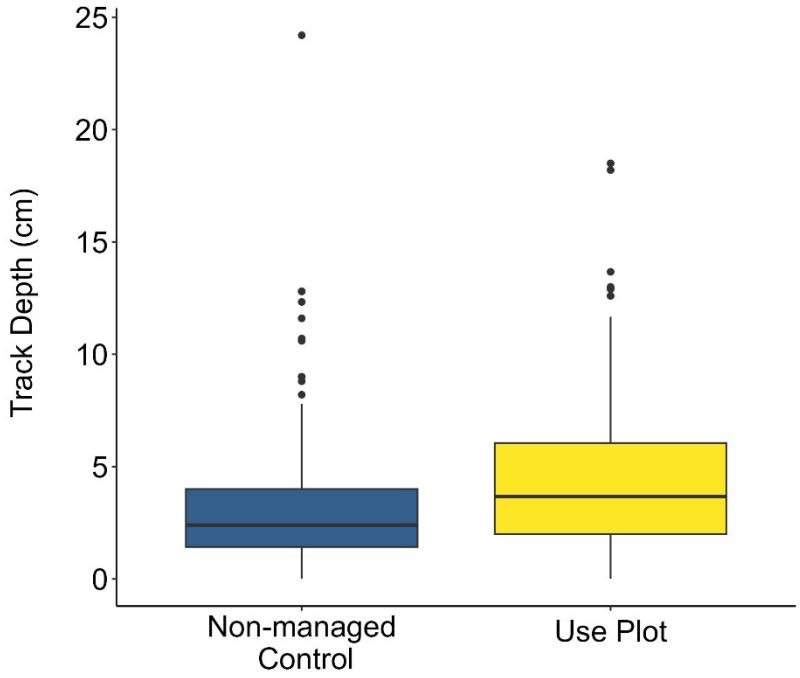


Figure 17-6: Track depth (cm) of caribou at Survey Plots on the Upwind and Downwind Side of the Whale Tail Haul Road.

17.1.4 Management Recommendations

Between 2020 to 2024, 73 locations were surveyed for the snow study, 9 of which were completed in 2024. Improvements for data collection implemented in 2023 and carried forward into 2024 allowed for a full suite of snow data (snow depth, snow hardness, slope) and caribou track data (in used plots and non-managed control plots) to be collected for a total of 45 survey locations. Considering snow survey locations across all years, snow berms were wider on the downwind (east) than the upwind (west) sides of the road. Average snow berm height was higher on the downwind wide of the road. The average snow berm height on both downwind and upwind sides of the road was less than 0.3 m (Table 17-2), which is lower than 60% brisket height for the majority caribou and not likely to impede locomotion for a caribou (Fancy and White 1987). Slope was similar on upwind and downwind sides of the road. Snow depth was slightly deeper on the downwind side of the road and differed between plot types (Table 17-2). Snow depth was similar between use plots and snow-managed control plots, but snow was deeper in non-managed control plots compared to both plot types in the berm area (Figure 17-4). Snow hardness was similar between plots on the upwind and downwind sides of the road (Table 17-1; Figure 17-3), and was also similar across plot types (Table 17-2; Figure 17-5). Caribou track depth measurements between use plots and non-managed control plots could only be compared for data collected in 2023 and 2024. Average track depths similar in use plots compared non-managed control plots (Figure 17-6). Results to date have not identified large absolute differences in the parameters measured.

Results from the 2022 power analysis (WSP 2023a) indicated that sample sizes are already sufficient to evaluate at moderate differences in snow hardness between plots (i.e., effect sizes of 50% or greater), however, collecting the full suite of snow data for 65 plots was recommended in order to be able to assess differences in snow hardness for smaller effect sizes (e.g., 25%) for both study questions. A minimum of 20 survey locations should be surveyed in 2025 to collect the remaining data required for the snow study. Final analysis of snow study data is anticipated to occur in 2025 if target sample sizes are achieved, and final results will be presented in the 2025 Wildlife Monitoring Summary Report.

17.2 Caribou Behaviour

The following is a summary of the Meadowbank Gold Mine Caribou Behaviour Study, 2024, completed by ERM Consultants Canada Ltd. (ERM 2025; Appendix J).

17.2.1 Overview

As part of the Nunavut Impact Review Board (NIRB) Project Certificates #004 and #008, Agnico Eagle is required to study and report on the effects of the Project on caribou. The TEMP (Agnico Eagle 2019) includes behaviour monitoring for caribou in response to various disturbances which have been conducted annually from 2020 to 2024.

During 2020, Agnico Eagle retained ERM to update the field protocols used for behaviour monitoring. ERM adapted standard methods for caribou behaviour monitoring developed by the Government of Northwest Territories Department of Environment and Natural Resources (GNWT-ENR 2017). Following the first two years of data collection (2020 and 2021) and comments from the TAG, GN, and KivIA, the protocols were since updated from 2019 to improve the quality of the data collected. Surveys were continued in 2023 and 2024 following the updated protocols.

Based on guidance from the TEMP (Agnico Eagle 2019), the overall objective of the caribou behaviour monitoring program is to determine if caribou activity budgets change with distance from the Mine, and to document caribou response to stressors. Agnico Eagle environmental technicians, contractors, and Nunavummiut seasonal workers

completed caribou behavior monitoring surveys during the spring and fall migration periods, summer calving periods, and winter period.

The detailed objectives of the 2024 were:

1) To conduct a study using the Government of Northwest Territories Department of Environment and Natural Resources (GNWT-ENR 2017) behaviour survey methodology at the Project site to estimate how the roads and other site infrastructure contribute to the effects of the Project on caribou.

2) To use information from the surveys to determine what factors predict caribou behaviour, specifically comparing:

   - near vs. far
   - large groups of caribou vs. small groups
   - surveys with and without disturbances
   - road open vs. closed and
   - upstream vs. downstream side of the road (east or west side, as determined by dominant direction of travel in each season)

17.2.2 Methods

17.2.2.1 Field Surveys

Survey methods followed protocols for monitoring caribou behaviour developed by the Government of Northwest Territories Department of Environment and Natural Resources (GNWT-ENR 2017). Field surveys were conducted during spring and fall migration, summer, and winter in all years (2020 to 2023) by the Agnico Eagle environmental technicians, with efforts to conduct roughly the same number of surveys in spring and fall migration seasons. In 2020, ERM refined these methods for Agnico Eagle's Nunavut mine operations to focus on scan samples, in lieu of both scan and focal samples due to time efficiency and higher quality data.

Behaviour surveys were completed by:

1. Identifying caribou groups visible from Mine infrastructure including the road;
2. Randomly selecting groups for observation; and
3. Recording the behaviour of individuals in groups of different sizes, including their responses without any disturbance and in response to Mine-related activities and natural factors.

Initially, reconnaissance surveys were also conducted during 2020 to identify where caribou groups were located but it was determined that many caribou groups would move away from the road before the field crew returned to conduct the behaviour survey. Where multiple groups of caribou were observed, surveyors randomly chose which group to sample or specifically chose groups to fill sampling gaps specifically for the group size and distance from road variables. Filling gaps ensured that data is adequate for both variables.

Each survey had a time interval of 30 minutes, with scan samples conducted every three minutes. Information recorded during the surveys included location of the survey, weather conditions present at time, road structure, and location of the caribou group in relation to the road. Prior to 2021, distance values were estimated by the observer. This method was later updated to include a laser rangefinder for more accurate distances. The behaviour of caribou in the group were categorized at the start of the survey and every three minutes after. Behaviour categories were standardised following GNWT-ENR (2017) classifications, which included feeding,

lying down, standing, alert, walking, and trotting or running. At each three-minute interval, surveyors recorded the number of individuals in the group exhibiting each behaviour at that time. If a group was large (>100), a subset of individuals was surveyed instead of the entire herd and was used to define the behaviour of the entire herd.

In the case that a disturbance event occurred during the survey, the time and type of disturbance was recorded. A disturbance is defined as any human-caused loud noise, low-flying aircraft, or vehicle travelling on the road. Blast disturbances were monitored under the Blast Monitoring Program which was developed in collaboration with the TAG (Agnico Eagle 2020). In the analysis all disturbances are treated equally. In the previous five years, 95% of disturbance events recorded were from road-related disturbances (vehicles) and the remaining 5% were from either blasts or helicopters.

Alert behaviour and trotting or running were considered disturbance “response behaviours” and were grouped together in the subsequent data analysis. In this report, alert and running behaviours are referred to collectively as response behaviours, but it is important to note that this is irrespective of whether there were disturbances recorded. Caribou may exhibit these behaviours without a disturbance occurring. Walking was also assessed as a response behaviour in some analyses, which are specifically noted in the results.

Following recommendations from the TAG in 2021, an additional set of longer surveys was completed to specifically look at the behavioural response to convoys of vehicles. These surveys were 90 minutes each, consisting of a “before convoy”, “during convoy” and “after convoy” survey. Observers sought out caribou that were likely to remain within view for 90 minutes, such as caribou that were feeding or laying down. Nine surveys were completed in both 2021 and 2022 using this extended methodology. Seventeen 90-minute surveys were conducted in 2023, though caribou frequently walked out of sight prior to completion of the 90-minute survey period. Ten surveys were conducted in 2024.

17.2.2.2 Data Analysis

The objective of the data analysis was to quantify trends in the survey data and determine whether factors such as distance to Project infrastructure (road), group size, or the disturbances could be used to explain caribou behavior. The primary hypothesis was that caribou closer to the road would demonstrate a stronger response to disturbances. An initial exploratory analysis was completed to visualize the data and determine the appropriate method for analyzing the data.

A regression analysis was conducted to test whether data from the surveys could be analyzed statistically. To increase the power to detect changes in caribou behaviour, the behaviour categories were grouped into response behaviours (alert and trotting or running) and non-response behaviours (feeding, lying down, standing, and walking).

Following the 2020 analysis, there was a suggestion from the TAG to explore whether the proportion of walking caribou changed as a response to disturbance. This was done to see if walking would be better categorized as a response behaviour or a non-response behaviour. To test this, a model that included walking, running, and alert behaviours was applied in addition to the original model with just running and alert behaviours.

Generalized linear mixed-effects models (GLMM) were used to assess the differences in the proportion of response behaviours in surveyed animals as a function of various controlling variables, including the occurrence of disturbances. Proportions were modelled using a binomial distribution due to the binary nature of the response variable. Because small groups naturally have greater variability in values (i.e., more likely that “all” or “none” of caribou are alarmed when there are only two caribou) an offset for the total number of caribou with tallied

behaviour was included. This regression framework provides a means to control for habitat, environmental variables, repeated measurements, and spatial correlation.

Statistical analyses were conducted using R Statistical Software version 4.3.1 (R Core Development Team, 2024) with the data from each three-minute time interval in each survey. Two dependent variables were tested:

1) Proportion of response behaviours in each time interval.

2) Proportion of walking plus response behaviour in each time interval.

The two dependent variables were modelled against a suite of potentially important variables to determine if there was any statistical relationship with response behaviour. The variables included in this analysis were group size, distance to road, temperature, wind speed, season and side of the road (upstream/downstream), the roads status (closed or open), and whether or not a disturbance occurred in the survey. Season and side of the road were included as an interaction term because direction of travel is seasonally dependent. In 2024, the convoy duration and number of vehicles in each convoy was collected, however, limited data precluded the inclusion of this data in models for 2024.

Full methods used for the caribou behaviour monitoring program are presented in Appendix J.

17.2.3 Results

Behaviour monitoring data from 2024 were combined with data from 2020, 2021, 2022, and 2023, and all results outlined in this report use all years, unless otherwise stated. The program and combined data resulted in several key findings:

- There were 70 surveys were conducted in 2024, 70 surveys in 2023, 104 surveys in 2022, 134 surveys in 2021, and 116 in 2020; Surveys were relatively equal between spring and fall migration periods and the overall distribution of surveys in 2024 was similar to 2023. In 2024, 7 surveys were conducted in winter, 31 surveys occurred during spring migration from March to May, 5 occurred during calving and summer from June to August, and 27 occurred during fall migration from September to December.
- Caribou group sizes ranged from 1 to 2 individuals to >100.There were 3 surveys containing road crossings and 33 surveys containing disturbances in 2024. There is not a clear relationship between caribou group size and road crossing observations.
- Caribou behaviour was relatively consistent between group sizes in 2024. Most caribou behaviour was “feeding” (non-response) across all group sizes. In 2024, 90% of caribou within 50 m of the road were observed standing, 70% of caribou within 50-100 m of the road were observed walking, and no distance category has surveys with more than 10% of caribou displaying response behaviours. The exception is smaller groups moved more than larger groups. Usually smaller groups (less than 25 individuals) crossed the road. However, data did not show a clear relationship between caribou size and road crossings.
- Larger groups of caribou tended to be recorded further from the road. To date, only seven groups larger than 50 individuals were recorded within 100 m of the road at the start of the survey, including two in 2021, three in 2022, and two in 2023.
- In total over the five years, 49% of surveys contained disturbances. An additional analysis was planned to look at how the number of vehicles in a convoy and duration of the convoy influence caribou behaviour, but due to a lack of data this was not included in 2024.

- Environmental/temporal variables included wind speed and temperature. The final response model indicated that temperature was a significant predictor of the proportion of caribou showing response behaviour, with more caribou showing response behaviour as temperature increases above 10°C.
- Following a disturbance event, the proportion of response behaviours in a group of caribou was significantly higher but generally returned to baseline behaviours within two sampling intervals (i.e., six minutes).
- Cox's proportional hazards modelling using all five years of data suggests that following a single disturbance, the probability of returning to non-response behaviour was 92% after 6 minutes, 98% after 9 minutes, and 100% after 15 minutes. The probability of returning to baseline behaviour within 6 minutes is lower for larger groups, and surveys with more than one disturbance - 86% for intervals with 2-3 disturbances and 84% for groups with >100 individuals.
- In response to comments from the KivIA, the behaviour of "walking" was investigated for whether it may be a response behaviour instead of a non-response behaviour. Models were examined with a response variable for response behaviours and a model for response behaviours with walking behaviours included. Odds ratios were used to evaluate the probability of a behavioural response increasing in response to disturbance, and the model without walking showed a much higher responses to disturbance. This indicates walking may be less associated with disturbance compared to other types of behavioural responses.
- Surveyors collected data both when the road was open and while it was closed beginning in 2021. There were 264 surveys conducted while the road was closed, and 174 surveys were conducted when the road was open across all years. Road closure status did not affect behaviour in the statistical analysis, however there was a higher proportion of individuals walking on average when the road was closed. This may be due to closures occurring more frequently during peak migration times.
- Statistical analysis found that side of road and season did not affect response behaviour (alert/running). Groups of caribou were observed on both the east and west sides of the road in all seasons but were more commonly observed on the west side during spring migration (i.e., upstream of the dominant direction of travel). The summer season showed relatively equal numbers of caribou groups on each side of the road, and the fall migration observed more groups on the upstream side (i.e., east side in the fall).
- The primary hypothesis of this study was that caribou closer to the road would demonstrate a stronger response to vehicle disturbances. Results of the statistical analysis provided mixed support for the hypothesis, as caribou tended to respond to disturbances, however, response behaviour did not differ with the distance from the road.

Full results of the caribou behaviour monitoring program are presented in Appendix J.

17.2.4 Management Recommendations

The updates applied in 2024 and in previous years to the survey protocol and analysis and were helpful in improving the overall quality and accuracy of the data. Even with the changes to the protocol, the trends in the results were highly consistent between the five years of data. This increases the confidence that trends are repeatable year to year. Overall, the results of the statistical analysis did not provide support for the key hypothesis that caribou tend to respond to disturbances more strongly when closer to the road, though they do respond to disturbances.

17.3 Road and Viewshed Survey Comparison

17.3.1 Overview

Following submission of the 2021 Wildlife Monitoring Summary Report (Golder, 2022), KivIA requested a comparison of the distance and direction of caribou observations from road and viewshed surveys (comment 4.7, Agnico Eagle 2022b). In 2023, a comparison was done that focused on the maximum distance caribou were detected from the road, the associated direction (i.e., side of road) and group sizes spotted from road and viewshed surveys. The intention of this comparison was to determine if viewshed surveys were acting as an early warning system for caribou approaching site or if road surveys were adequately capturing caribou far away from roads and implementing adequate mitigation measures. The analysis reported herein expands the previous comparison with data from 2024. In addition, an attempt was made to compare detection probabilities between viewshed and road surveys. This was done by comparing each method's ability to detect collared caribou. Unfortunately, the sample size was insufficient for this analysis due to time differences between the survey types and the number of matching collared caribou fixes (see section 17.3.3.3).

17.3.2 Methods

The number of surveys by month where both road and viewshed surveys were completed on the WHTR are shown in Table 17-3. The mean and 95th percentile of the distance caribou were observed from the road and the group size of the observation were calculated for each survey type by season. Figure 17-7 was produced to allow qualitative comparison of caribou observations from road and viewshed surveys. Mixed-effect models with year as a random effect were used to compare the distances at which caribou were spotted and the group sizes spotted across survey types. A linear mixed-effect model with a square root transformation on the distance variable was used to model the relationship between distance and survey type. A generalized linear mixed-effect model with a Poisson family and a log link was used to model the relationship between survey type and the counts of group size spotted. Additionally, across all years, an attempt was made to quantify the detection probabilities of road and viewshed surveys by matching the time and location of survey detections with the time and location of collared caribou. This was done by creating a five-kilometer view-distance polygon around the survey locations and checking for any collared caribou GPS fixes that fell within these polygons. The goal was to measure a rate of successful detection for any caribou (i.e., collared or not collared) for each survey type, which accounted for cases when collared caribou might be "available" to be seen but were no caribou were spotted during surveys.

Table 17-3: Number of Road and Viewshed Surveys Completed by Month.

Year	Month	Number of Road Surveys	Number of Road Surveys with Caribou Detections	Percent of Road Surveys with Caribou Detections (%)	Number of Viewshed Surveys	Number of Viewshed Surveys with Caribou Detections	Percent of Viewshed Surveys with Caribou Detections (%)
2021	January	3	1	33.33	0	0	N/A
	February	3	0	0.00	1	0	0
	March	7	0	0.00	0	0	N/A
	April	30	21	70.00	0	0	N/A
	May	19	19	100.00	0	0	N/A
	June	6	6	100.00	0	0	N/A
	July	6	2	33.33	1	1	100.00
	August	6	6	100.00	5	5	100.00
	September	13	11	84.62	4	4	100.00
	October	13	6	46.15	6	2	33.33
	November	22	5	22.73	3	2	66.67
	December	16	4	25.00	2	0	0
Total 2021		**144**	**81**	**56.25**	**22**	**14**	**63.64**

Table 17-3: Number of Road and Viewshed Surveys Completed by Month.

Year	Month	Number of Road Surveys	Number of Road Surveys with Caribou Detections	Percent of Road Surveys with Caribou Detections (%)	Number of Viewshed Surveys	Number of Viewshed Surveys with Caribou Detections	Percent of Viewshed Surveys with Caribou Detections (%)
2022	January	7	4	57.14	4	0	0.00
	February	7	4	57.14	4	3	75.00
	March	7	3	42.86	6	1	16.67
	April	36	30	83.33	7	4	57.14
	May	25	22	88.00	7	3	42.86
	June	12	5	41.67	3	1	33.33
	July	9	2	22.22	5	1	20.00
	August	36	33	91.67	5	5	100.00
	September	11	7	63.64	6	4	66.67
	October	17	5	29.41	5	1	20.00
	November	19	10	52.63	3	0	0.00
	December	7	2	28.57	4	0	0.00
Total 2022		**193**	**127**	**65.80**	**59**	**23**	**38.98**
2023	January	6	1	16.67	3	0	0.00
	February	8	1	12.50	5	1	20.00
	March	14	7	50.00	4	0	0.00
	April	37	33	89.19	10	8	80.00
	May	41	41	100.00	6	5	83.33
	June	10	10	100.00	3	1	33.33
	July	5	0	0.00	4	0	0.00
	August	26	24	92.31	5	3	60.00
	September	23	19	82.61	5	2	40.00
	October	27	17	62.96	15	8	53.33
	November	25	2	8.00	16	0	0.00
	December	20	6	30.00	12	1	8.33
Total 2023		**242**	**161**	**66.53**	**88**	**29**	**32.95**
2024	January	14	7	50.00	11	4	36.36
	February	10	2	20.00	4	0	0
	March	8	2	25.00	4	0	0
	April	24	22	91.67	6	5	83.33
	May	34	31	91.18	19	16	84.21
	June	12	9	75.00	5	4	80.00
	July	12	3	25.00	5	0	0
	August	17	13	76.47	4	3	75.00
	September	10	2	20.00	5	1	20.00
	October	16	3	18.75	13	2	15.38
	November	17	7	41.18	10	1	10.00
	December	20	4	20.00	13	2	15.38
Total 2024		**194**	**105**	**54.1**	**99**	**38**	**38.40**
Total		**773**	**474**	**61.32**	**268**	**104**	**38.81**

17.3.3 Results

17.3.3.1 Historical Results

There were 132 days in which both survey types were completed on the WTHR on the same day across all seasons in 2021, 2022 and 2023, and on 45 of these 132 days, caribou were detected during road and viewshed surveys. On the 45 days with both survey types conducted on the same day, the observation distance was farther for viewshed surveys in 23 out of 45 occasions (51%) and the observation distance was farther for road surveys in 13 out of 45 occasions (29%). In nine of 45 occasions, the recorded distances were the same between survey types.

The percentage of road surveys with caribou detections was higher than the percentage of viewshed surveys with caribou detections in each season except summer 2021 (Table 17-4). The 95th percentile of distance of caribou groups from the road was higher for viewshed surveys than road surveys except in fall 2021 (Table 17-4). There was large variation in the distance that caribou were observed from the road and the group size observed from both survey types indicated by large standard deviation (Table 17-4). If viewshed surveys were detecting caribou approaching further from the road, more observations would be expected on the east side of the road in the fall and on the west side of the road in the spring. This was true in fall and spring of 2022 and 2023, however more observations on the west side of the road were observed in fall 2021.

There were relatively few observations from both survey types in winter (Table 17-4), none of which exceeded the GST in 2021 or 2022, but two observations from road surveys exceeded GST in 2023 (Figure 17-7). The percentage of viewshed surveys that detected caribou was higher in the summer and spring than in other seasons (Table 17-4). No viewshed observations exceeded GST in summer, but some observations exceeded GST during spring and one observation exceeded GST in fall (Figure 17-7). Smaller average caribou group sizes from maximum distance observations were observed from viewshed surveys in the summer, fall, and winter, and larger group sizes were observed in the spring (Table 17-4). Some of the observations far from the road (i.e., greater than 1.5 km) were of larger caribou groups (Figure 17-7). The majority of caribou groups that triggered GST exceedances were observed from road surveys.

It was expected that viewshed surveys would detect caribou farther from the road on average, as these surveys are intended to identify caribou approaching the road as an early warning system. For all seasons with both road surveys and viewshed surveys conducted, viewshed surveys had a farther average detection distance, except for fall 2021 (Table 17-4). Both survey types were capable of detecting caribou at long distances, with a maximum recorded distance of 4 km for road surveys and maximum recorded distance of 3 km for viewshed surveys.

17.3.3.2 2024 Results

In 2024, there were 94 days in which both WTHR survey types were completed on the same day across all seasons. On 31 of these days, caribou were detected during road and viewshed surveys. During these days, the observation distance was farther for viewshed surveys in 13 out of 31 occasions (42%) and the observation distance was farther for road surveys in 8 of 31 occasions (26%). For the remaining 10 of 31 occasions, the recorded distances were the same between survey types.

The percentage of road surveys with caribou detections was higher than the percentage of viewshed surveys with caribou detections across all seasons (Table 17-4). The 95th percentile of distance of caribou groups from the road was higher for viewshed surveys than road surveys (Table 17-4). There was large variation in the distance that caribou were observed from the road and the group size observed from both survey types (i.e., large standard deviations; Table 17-4). More caribou were detected on the west side of the roads irrespective of season (Table 17-2).

There were relatively few observations from both survey types in winter (Table 17-4), none of which exceeded the GST. In all other seasons, road surveys observed more groups that exceeded GST than viewshed surveys (Figure 17-1). Smaller average caribou group sizes from maximum distance observations were observed from viewshed surveys across all seasons except winter (Table 17-4). Although both survey types could detect caribou far from the road (Table 17-7), few observations at long distances (i.e., greater than 1.5 km) were of large caribou groups (Figure 17-7).

17.3.3.3 Detectability across years

Mixed-effect models were used on the combined data to determine if there were any significant differences between survey methods in the distance that caribou were spotted or the groups sizes spotted. An attempt was also made to compare the ability of each method to detect caribou based on collared caribou presences within 5 km of the survey.

Analysis found that viewshed surveys spotted caribou at further distances ($M_{viewshed}$ = 1,292 m, M_{road} = 936 m; β = 4.81, SE = 2.01, t = 2.39. p = 0.018), whereas road surveys spotted significantly larger caribou groups ($M_{viewshed}$ = 15.4, M_{road} = 20.8; β = -0.3, SE = 0.04, z = -7.71. p < 0.001). In addition, a test of equal proportions found that the proportion of road surveys that detected caribou was significantly larger than the proportion of viewshed surveys (Table 17.1; Road proportion: 0.61, Viewshed proportion: 0.39; χ^2_1= 39.94, p < 0.001).

It was not possible to determine detectability differences between road and viewshed surveys using collar data. This is because there were only 4 instances in which the times and locations of collared caribou GPS fixes matched surveys or were reasonably close in time (all four instances were road surveys). The mismatch between surveys and GPS fixes was likely the result of few collared caribou interacting with the Project, and the fact that collar times are constrained to 4-hour fixes and survey times are not.

Table 17-4: Summary Statistics for Caribou Observations from Road and Viewshed Surveys along the Whale Tail Haul Road.

Year	Season	Survey Type	Number of Surveys	Number of Surveys with Caribou Observations	Number of Caribou Observations	Percentage of Surveys Caribou Observed (%)	Number of Observations East Side of Road[a]	Number of Observations West Side of Road[a]	Average Distance of Caribou Observations from Road (Mean ± Standard Deviation)	95th Percentile of Distance of Caribou Observations from Road	Average Caribou Group Size (Mean ± Standard Deviation)	95th Percentile of Caribou Group Size
2021	Spring	Road	48	33	297	68.75	38	242	399.18 ± 390.21	1020	35.52 ± 47.32	120
		Viewshed	0	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A [b]
	Summer	Road	26	20	171	76.92	82	75	218.05 ± 310.99	800	6.12 ± 8.03	22
		Viewshed	9	9	29	100.00	25	4	820.00 ± 922.87	3000	5.14 ± 5.57	15
	Fall	Road	49	18	38	36.73	15	22	388.16 ± 660.20	915	8.00 ± 12.61	25
		Viewshed	9	4	10	44.44	6	4	316.50 ± 312.23	855	3.80 ± 2.66	8
	Winter	Road	21	4	5	19.05	3	2	278.80 ± 169.07	464	5.60 ± 4.04	10
		Viewshed	2	0	0	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]	N/A[b]
2022	Spring	Road	59	44	149	83.02	36	107	378.97 ± 366.79	1000	30.34 ± 41.89	110
		Viewshed	14	7	12	50.00	3	9	1194.42 ± 965.67	2725	28.75 ± 38.00	100
	Summer	Road	66	43	337	70.49	126	157	194.05 ± 214.53	600	4.41 ± 8.38	13
		Viewshed	16	9	25	56.25	10	15	422.60 ± 546.01	1400	2.80 ± 3.03	8
	Fall	Road	44	18	31	40.91	22	8	325.29 ± 299.51	950	8.35 ± 13.92	32
		Viewshed	12	3	6	25.00	1	5	803.33 ± 702.61	1750	4.83 ± 5.91	14
	Winter	Road	24	11	18	45.83	14	4	245.33 ± 174.87	600	4.89 ± 3.14	10
		Viewshed	17	4	4	25.00	1	3	625.00 ± 554.53	1170	4.25 ± 1.71	6
2023	Spring	Road	73	51	643	92.73	52	523	410.45 ± 469.86	1500	47.88 ± 75.60	179
		Viewshed	15	13	94	81.25	21	73	930.37 ± 819.05	2675	43.70 ± 82.03	150
	Summer	Road	64	51	419	85.96	188	179	263.50 ± 300.18	1000	7.28 ± 14.20	20
		Viewshed	16	6	26	37.5	12	14	453.46 ± 501.02	1425	3.65 ± 2.24	8
	Fall	Road	69	24	54	38.71	45	7	481.39 ± 674.74	2000	35.61 ± 72.28	164
		Viewshed	40	9	13	22.5	9	4	1355.77 ± 1023.18	3000	24.08 ± 43.46	109
	Winter	Road	36	11	15	30.56	3	9	474.80 ± 732.60	2000	6.73 ± 11.49	33
		Viewshed	17	1	1	5.88	0	1	1000.00	1000	6.00	6
2024	Spring	Road	53	43	272	94.34	39	219	474.34 ± 461.52	1500	41.92 ± 86.99	159
		Viewshed	23	19	52	76	7	45	1176.92± 919.45	3000	25.35 ± 34.13	100
	Summer	Road	52	32	79	71.13	31	43	235.19 ± 359.35	1000	6.81 ± 28.48	15
		Viewshed	18	12	23	60	2	21	647.39 ± 607.38	1770	5.53 ± 4.44	12
	Fall	Road	49	13	51	70.73	41	9	540 ± 505.27	1500	77.57±150.22	253
		Viewshed	36	6	9	16.22	5	4	1772.22 ± 1212.21	3300	53 ± 69.52	177
	Winter	Road	40	11	16	84.71	13	3	468.75 ± 308.83	1050	6.87 ±5.55	16
		Viewshed	22	4	4	17.39	4	0	743.75 ± 490.91	1170	9.25±9.50	21

(a) Does not include observations where caribou groups were observed on both sides of road.

(b) N/A = not applicable. No caribou detections in a given season, therefore summary statistics cannot be calculated.

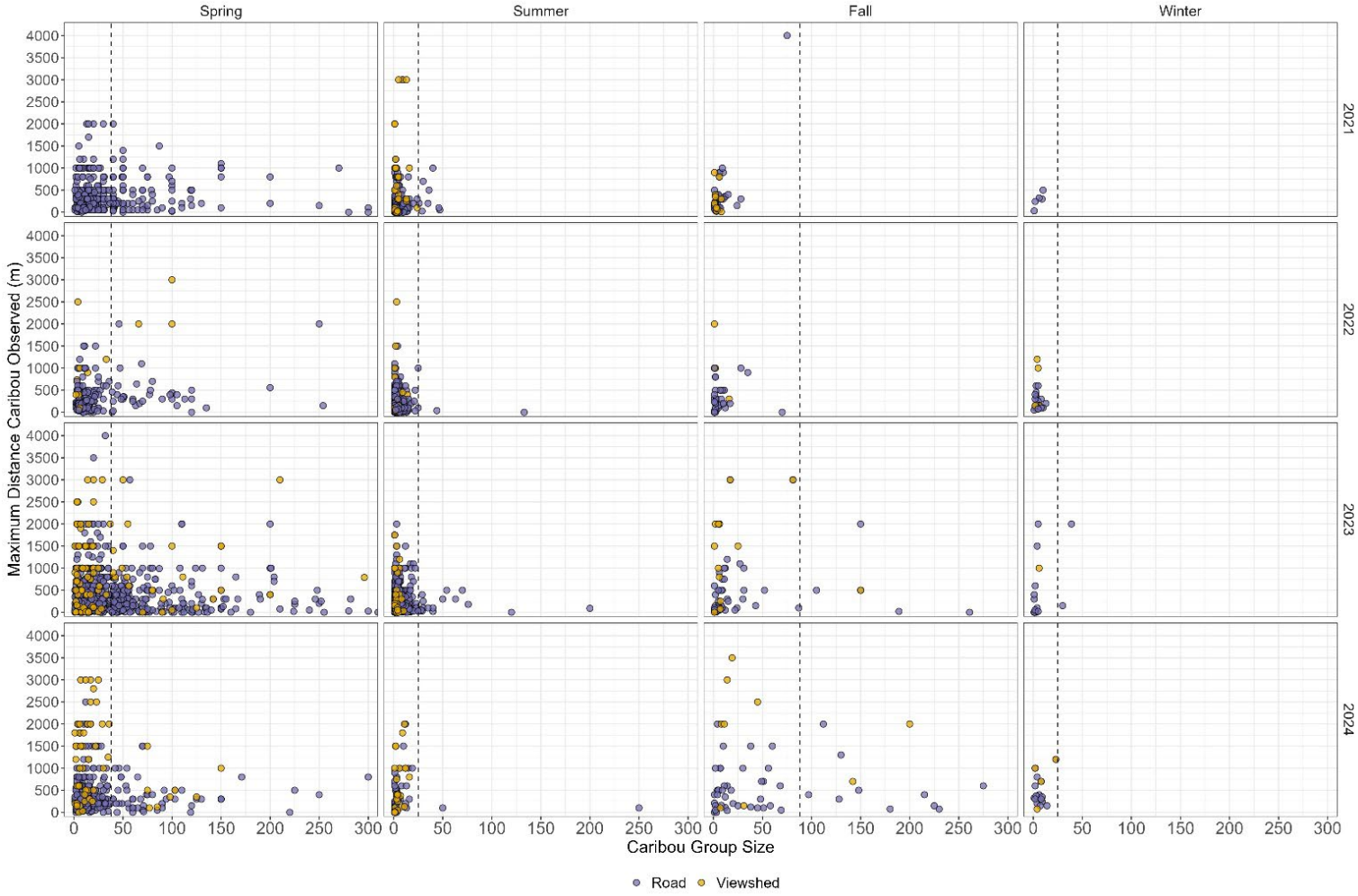


Figure 17-7: Group Size and Distance of all Caribou Observations by Survey Type and Season. The Dashed Line Indicates Group Size Thresholds for each Season.

17.3.4 Management Recommendations

A significantly larger proportion of road surveys detected caribou compared to viewshed surveys. In addition, road surveys detected larger groups of caribou. Observations of larger caribou groups may be related to road surveys occurring throughout the migration season as opposed to the use of viewshed surveys for identifying the start of migration. Because of this, road surveys are more likely to be used to trigger mitigation actions such as road closures. Viewshed surveys allow for caribou to be observed at greater distances than road surveys.

Overall, road surveys were conducted more frequently, were more likely to detect caribou and were more likely to result in road closure mitigation. Although viewshed surveys were designed to have a large detection radius, they are comparatively less flexible and have less spatial coverage than road surveys. Research has found that wildlife surveys that follow a set path (i.e., the road surveys) can detect more animals than stationary point surveys like the viewshed surveys (Hutschenreiter et al. 2021). This can be the result of increased encounter rates due to covering more ground, as well as by spending more time searching and encountering new individuals (Buckland et al., 1993; Hutschenreiter et al. 2021). In addition, any distance advantage that viewshed surveys have in spotting wildlife, may be offset by detectability decreasing with distance from the observer. This could result in undetected individuals and smaller group size estimates (Thomas et al., 2010).

Analysis suggests that road surveys are likely more effective at detecting caribou under current circumstances. The results of the comparison presented indicates that if viewshed survey effort is discontinued, it would likely have little impact on the effectiveness of wildlife monitoring and triggering mitigation, especially while considering that caribou GPS collars are also used as an early indicator of the start of migration. In October 2024, the TAG agreed that viewshed surveys are less effective at detecting caribou and may be discontinued as future TEMP monitoring (Agnico Eagle 2024d).

17.4 Caribou Migration Studies

Two caribou collar studies were conducted in 2024 based on TAG recommendations. Following review of the results from analyses of spring caribou movements at the November 2023 TAG meeting (Agnico Eagle 2023), the TAG requested similar analyses supporting lead caribou triggers during fall migration to assess whether a lead caribou closure might be applicable during the fall migration season. Patterns of fall migration differ from spring migration, which prompted a separate assessment to characterize fall migration. Results of this assessment showed that the fall migration period takes place over a longer period and is more variable compared to spring migration (Appendix K). The high variability of fall migration would pose additional challenges for implementation of a lead caribou approach for caribou protection measures and may be less likely to produce the intended mitigative results of a lead caribou migration closure compared to spring. Differences between herds and whether the timing of fall migration aligns between herd may explain some of the variation in fall migration patterns across years. Biological drivers, such as foraging and movements during the breeding season in addition to movements towards winter ranges (Cameron and Whitten 1979, Nicholson et al. 2016) are likely important influences increasing variability during the fall migration season. Full results of this assessment are presented in Appendix K. Following the presentation of these results at the August 2024 TAG meeting (TAG #20; Agnico Eagle 2024c), the TAG decided to pursue a different mitigation strategy for the fall migration focused on increasing gaps in traffic to facilitate caribou crossings.

New spring mitigation measures for the protection of lead caribou were developed in collaboration with the TAG, and during spring 2024 the new mitigation measures were implemented. Following implementation of the new measures, an exploratory analysis of collared caribou data and road survey data for the 2024 spring migration period was completed to understand the effects of these additional lead caribou mitigations on movement

patterns. The objectives of the analyses were to determine if the movement patterns differed during spring 2024 migration compared to previous years, and to determine if speed and duration of migration through the AWAR WTHR differed during the spring 2024 migration compared to previous years. Results of this study did not show increased speeds or a shortened spring migration duration. The lack of detectable effect may be due to limited sample sizes or a negligible magnitude of effect for this mitigation strategy given the limited time and number of caribou that interact with roads. However, if the purpose of the lead caribou program is simply to allow lead caribou groups to encounter closed roads, a measurable change in migration speed or migration duration may not be necessary as a measure of success. As well, the possible benefits to migration recognized by IQ may be different than speed or duration. Lead caribou closures allow for a collaborative approach through community input in the mitigation decision making process, while also remaining feasible for Mine operation. Results of the lead caribou assessment were presented at the fall 2024 TAG meeting (TAG meeting #21, Agnico Eagle 2024d).

18.0 SUMMARY

The 2024 Annual Report describes the data collected to date from the various monitoring programs associated with the TEMP version 7 (Agnico Eagle 2019). The 2024 Annual Report describes natural and Project-related effects on wildlife populations and plant communities occurring near the Project.

In 2024, monitoring efforts focused on areas immediately around the Meadowbank Mine and Whale Tail Mine sites, along the AWAR and the WTHR. Surveying and monitoring efforts focused on evaluating current habitat losses, monitoring nesting success of raptors and monitoring and managing wildlife presence, particularly caribou, near the Project facilities and infrastructure. A summary of potential Project effects, threshold levels and the 2024 monitoring results is provided in Table 18-1.

18.1 Accuracy of Impact Predictions

Table 18-1: Potential Project Effects, Thresholds and Results of Monitoring in 2024

Potential Effect	Thresholds	Monitoring Methods	Frequency	Completed in 2024	Threshold Exceeded (2024)
Vegetation (Wildlife Habitat)					
Habitat Loss (Compared to Permitted Areas)	Meadowbank = 1,531 ha AWAR = 456 ha Whale Tail = 1,584 ha Threshold is >5% habitat loss of permitted area	Ground Surveys; Mapping and GIS analyses – ELC habitat mapping	Every three years	YES	NO
Habitat Reclamation following Mine Closure	N/A	Ground Surveys; Mapping and GIS analyses – ELC habitat mapping	Every three years to 11 years post-closure	NO	N/A
Ungulates					
Habitat Loss and Degradation (Compared to Permitted Areas)	Meadowbank: Growing = 531 ha Winter = 407 ha AWAR Growing = 75 ha Winter = 271 ha Whale Tail + WTHR: Growing = 58 ha Winter = 1,116 ha	Ground Surveys; Mapping and GIS analyses – ELC habitat mapping	Every three years	YES	NO
Sensory Disturbance	No threshold but Decisions Trees followed when caribou are seen near mine facilities	AWAR, Vault Haul Road, and WTHR surveys; Satellite-collaring data; Viewshed surveys; Daily and weekly pit and Mine-site ground surveys; Incidental wildlife reporting	Daily / weekly	YES; Multiple road closures and notices, good engagement of Wildlife Log by site staff. Use of Decision Tree for Management and Monitoring.	N/A
Project-related Mortality - Vehicle Collisions	Two individuals (cumulative across Project)	AWAR and WTHR surveys; daily and weekly pit and Mine-site ground surveys; collision reporting system	Mine site – daily AWAR and WTHR – up to every two days at peak migration	YES	NO; There was one caribou mortality that took place on the AWAR on 05 January 2024.
Hunting by Baker Lake Residents	20% Change in Harvest Patterns in RSA from Historic	Hunter Harvest Study	Yearly	YES	NO

Table 18-1: Potential Project Effects, Thresholds and Results of Monitoring in 2024

Potential Effect	Thresholds	Monitoring Methods	Frequency	Completed in 2024	Threshold Exceeded (2024)
Other Project-related Mortality	Two individuals (cumulative across Project).	Daily and weekly pit and Mine-site ground surveys; collision reporting system	Daily	YES	NO
Predatory Mammals					
Disturbance to denning predators	One den failure.	Den site surveys	As required	NO	N/A
Project-related Mortality	Two individuals (cumulative across Project).	AWAR and WTHR surveys; daily and weekly pit and Mine-site ground surveys; collision reporting system	Mine site – daily AWAR and WTHR – up to every two days at peak migration	YES	NO; There was one wolverine mortality on the WTHR
Raptors					
Disturbance of Nesting Raptors	One nest failure.	Daily and weekly pit and Mine-site ground surveys; Incidental wildlife reporting; Dedicated raptor nest surveys; AWAR, Vault Haul Road, and WTHR surveys	Nests within 200 m - daily Nests from 200 to 1,000 m - weekly	YES	NO
Project-related Mortality	One individual (cumulative across Project).	AWAR, Vault Haul Road, and WTHR surveys; Daily and weekly pit and Mine-site ground surveys; Collision reporting system	Mine site – daily AWAR and haul roads – up to every two days at peak migration	YES	NO
Waterbirds					
Disturbance of Nesting Waterfowl	One nest failure.	Daily and weekly pit and Mine-site ground surveys; Waterbird nest surveys	Yearly - for active nests within 200 m	YES	NO
Project-related Mortality	One individual (cumulative across Project),	AWAR, Vault Haul Road, and WTHR surveys; Collision reporting system	Mine site – daily AWAR and WTHR – up to every two days at peak migration	YES	YES; There were six long-tailed duck mortalities
Other Breeding Birds					
Changes in Breeding Bird Populations	20% Change from Natural,	PRISM Plots and Breeding Bird Surveys	PRISM – 48 PRISM sites over ten years (2021 to 2031) Breeding Bird Surveys – at minimum every three years	YES.	N/A. Population trend not assessed in 2024.

AWAR = All-Weather Access Road, ELC = Ecological Land Classification, GIS = geographic information systems, ha = hectares, N/A = not applicable, RSA = Regional Study Area, WTHR = Whale Tail Haul Road.

19.0 CLOSURE

We trust the above meets your present requirements. If you have any questions or require additional information, please do not hesitate to contact the undersigned.

WSP Canada Inc.

ORIGINAL SIGNED BY

Jennifer Foca
Senior Wildlife Biologist

ORIGINAL SIGNED BY

Dan Coulton, R.P.Bio.
Principal, Wildlife Biologist

JF/DC/jm/jr

20.0 REFERENCES

Agnico Eagle (Agnico Eagle Mines Ltd). 2011. 2010 Wildlife Monitoring Summary Report. 153 p.

Agnico Eagle. 2019. Terrestrial Ecosystem Management Plan, Meadowbank Division. Version 7, June 2019. 222 p.

Agnico Eagle. 2020. Meadowbank Mine 2019 Wildlife Monitoring Summary. April 2020. 147 p + Appendices.

Agnico Eagle. 2022a. Meadowbank Complex 2021 Migratory Bird Protection Report. March 2022. 16 p + 1 Appendix.

Agnico Eagle. 2022b. Response to Meadowbank (03MN107) and Whale Tail (16MN056) 2021 Annual Report Comments. 75 p.

Agnico Eagle. 2023. Meadowbank Terrestrial Advisory Group Official Meeting No. 15 (Minutes). 47 p.

Agnico Eagle. 2024a. Meadowbank Terrestrial Advisory Group Official Meeting No. 17 (Minutes). 53 p. //

Agnico Eagle. 2024b. Meadowbank Terrestrial Advisory Group Official Meeting No. 19 (Minutes). 10 p.

Agnico Eagle. 2024c. Meadowbank Terrestrial Advisory Group Official Meeting No. 20 (Minutes). 10 p.

Agnico Eagle. 2024d. Meadowbank Terrestrial Advisory Group Official Meeting No. 21 (Minutes). 51 p.

Agnico Eagle. 2025. Terrestrial Ecosystem Management Plan, Meadowbank Division. Version 9, February 2025. 235 p.

ANZEC (Australian and New Zealand Environment Council). 1990. Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration. 7 p.

Arctic Raptors. 2025. [Raptor Monitoring Program Report]. Prepared for Agnico Eagle Mines Ltd. Sherwood Park AB: Arctic Raptors. 22 p.

Bonnett. 2024. Trent University MSc Thesis “Effects of a Topographical Gradient on Food Availability, Nest Site Selection, Nest Initiation, and Nest Success for Two Small, Low Arctic Breeding Bird Species”

Buckland ST, Anderson DR, Burnham KP, Laake JL. 1993. Distance Sampling: Estimating Abundance of Biological Populations. Oxford University Press, Oxford UK.

Campbell MW, Shaw JG, Blyth CA. 2012. Kivalliq Ecological Land Classification Map Atlas: a wildlife perspective. Government of Nunavut, Department of Environment. Technical Report Series #1-2012. 274 pp.

CESCC (The Canadian Endangered Species Conservation Council). 2010. Non-Native & Invasive Species in Nunavut. [Accessed November 2023]. https://www.gov.nu.ca/environment/documents/non-native-invasive-species-nunavut-brochure.

Cumberland (Cumberland Resources Ltd). 2005. Meadowbank Gold Project. Environmental Impact Assessment. October 2005.

Cumberland. 2006. Meadowbank Gold Mine Project Terrestrial Ecosystem Management Plan (TEMP). Final Report, December 2006.

Dougan & Associates. 2015. Whale Tail Pit & Whale Tail Haul Road Terrestrial Baseline Characterization Report. 173 p.

Environment Canada. 2009. Environmental Code of Practice for Metal Mines. 108 p.

ERM (ERM Consultants Canada Ltd). 2025. Meadowbank Gold Mine Caribou Behaviour Study, 2024. 144 pp + 5 App.

GN (Government of Nunavut Department of Environment). 2021. Method for Calculating Caribou Group Size Thresholds (GST). 5 p.

GNWT ENR (Government of Northwest Territories Department of Environment and Natural Resources). 2017. Caribou Behaviour Monitoring Field Protocols. 10 p.

Golder (Golder Associates Ltd). 2016. Whale Tail Pit Final Environmental Impact Statement Amendment.

Golder. 2018. Whale Tail Pit – Expansion Project Final Environmental Impact Statement Addendum. 374 p.

Golder. 2020a. Lorillard Collared Caribou Movements: Implications from Interacting with the Whale Tail Haul Road and All-Weather Access Road. Report prepared for Agnico Eagle Mines Ltd.

Golder. 2020b. Whale Tail Viewshed Analysis – Roadside Survey Points. Unpublished Technical Memorandum prepared for Agnico Eagle Mines Ltd.

Golder. 2020c. Whale Tail Pit – blasting measurements from August, September, and December 2019. Unpublished Technical Memorandum prepared for Agnico Eagle Mines Ltd. 7 p.

Golder. 2020d. 2019 Meadowbank Non-native Plant Monitoring Study. Unpublished Technical Memorandum prepared for Agnico Eagle Mines Ltd. 12 p.

Golder. 2020e. Whale Tail Expansion Project Commitment 9: Proposed Haul Road Snow Study. Unpublished Technical Memorandum prepared for Agnico Eagle Mines Ltd. 9 pp.

Golder. 2021. Meadowbank Mine 2020 Wildlife Monitoring Summary Report. April 2021. 108 p + Appendices.

Golder. 2022. Meadowbank Mine 2021 Wildlife Monitoring Summary Report. 158 p + Appendices.

Gurarie E, Hebblewhite M, Joly K, Kelly AP, Adamczewski J, Davidson SC, Davison T, Gunn A, Suitor MJ, Fagan WF, Boelman N. 2019. Tactical departures and strategic arrivals: Divergent effects of climate and weather on caribou spring migrations. Ecosphere 10(12). https://doi.org/10.1002/ecs2.2971

Holmes G. 2022. Trent University MSc Thesis "*Assessing and Mitigating the Impacts of Mining-Induced Flooding on Arctic-Nesting Birds*".

Holmes, GI, Nol E, and Smith PA. 2024. Deterrents intended to mitigate mining effects mostly fail to change nesting behavior of Arctic breeding birds. Avian Conservation and Ecology 19(2):17. https://doi.org/10.5751/ACE-02714-190217

Hutschenreiter A, Ramos-Fernández G, Aureli F. 2021. Line-transect versus point-transect sampling: the effects of survey area and survey effort on method efficiency for Geoffroy's spider monkeys. Wildlife Research 48(7): 590–597. https://doi.org/10.1071/wr20188

Joly K, Cameron MD, White RG. 2024. Behavioral adaptation to seasonal resource scarcity by Caribou (Rangifer tarandus) and its role in partial migration. Journal of Mammalogy, 106(1): 96–104. https://doi.org/10.1093/jmammal/gyae100

KivIA (Kivalliq Inuit Association). 2019. Kivalliq Inuit Association review of Whale Tail Expansion Project Commitment 9: Proposed Haul Road Snow Study. 2 October 2019. Prepared for the Kivalliq Inuit Association by Aurora Wildlife Research. Nelson, BC.

Mallory CD, Williamson SN, Campbell MW, Boyce MS. 2020. Response of barren-ground caribou to advancing spring phenology. Oecologia, 192(3): 837–852. https://doi.org/10.1007/s00442-020-04604-0

Nagy JA, Johnson DL, Campbell MW, Derocher AE, Dummond M, Allaire D, Croft B. 2011. Subpopulation structure of caribou (*Rangifer tarandus L.*) in Arctic and Subarctic Canada. Ecological Applications 21:2334–2348.

NWMB, Nunavut Wildlife Management Board. 2004. The Nunavut Wildlife Harvest Study. Prepared by Priest, H., Harvest Study Coordinator, NWMB and Usher, P. J., P.J. Usher Consulting Services.

Oregon State University. 2024. Flixweed/Tansy Mustard. [Accessed October 2024]. https://smallfarms.oregonstate.edu/sites/agscid7/files/pp_flixweed_tansy_mustard.pdf.

SSIC (Sea to Sky Invasive Species Council). 2021. Scentless Chamomile. [Accessed October 2024]. https://ssisc.ca/wp-content/uploads/2021/06/Scentless-Chamomille-Factsheet-2021.pdf.

Thomas L, Buckland ST, Rexstad EA, Laake JL, Strindberg S, Hedley SL, Bishop JR, Marques TA, Burnham KP. 2009. Distance software: design and analysis of distance sampling surveys for estimating population size. Journal of Applied Ecology, 47: 5–14. https://doi.org/10.1111/j.1365-2664.2009.01737.x

WSP (WSP Canada Inc). 2023a. Meadowbank Complex 2022 Wildlife Monitoring Summary Report. 158 p + Appendices.

WSP. 2023b. Whale Tail Extension Noise and Vibration Modelling. 17, 23, 24 pp.

WSP. 2024. Meadowbank Complex 2023 Wildlife Monitoring Summary Report. 186 p + Appendices.

Acts/Regulations

Consolidation of *Wildlife Act.* 2003. S.Nu. 2003,c.26. Current to: February 13, 2020. Government of Nunavut. Territorial Printer for Nunavut.

APPENDIX A

Wildlife Database

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-01-01	Yes	Muskox	7	Foraging	N/A	100	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-01	Yes	Caribou	70	Foraging	N/A	1000	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Speed restriction at KM53 Road was restricted access
Road	2024-01-01	Yes	Caribou	22	Standing	Not Recorded	200	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Caribou	7	Foraging	N/A	300	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Caribou	3	Foraging	N/A	350	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Muskox	1	Foraging	N/A	350	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Caribou	18	Foraging	N/A	300	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Caribou	15	Foraging	N/A	500	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Caribou	44	Foraging	N/A	500	68	East	No	-96.32681	64.82032	N/A	N/A	No	Exceeded!!	Speed restriction 67 to 69 Road was restricted access
Road	2024-01-02	Yes	Caribou	25	Foraging	N/A	500	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-02	Yes	Caribou	22	Foraging	N/A	1500	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-02	Yes	Caribou	5	Walking	W	300	50	West	Yes	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-02	Yes	Caribou	16	Foraging	N/A	750	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-02	Yes	Caribou	15	Foraging	N/A	400	72	West	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-03	Yes	Caribou	55	Foraging	N/A	700	71	East	No	-96.3197	64.84471	N/A	N/A	No	Exceeded!!	Speed restriction was put in place Road was restricted access
Road	2024-01-03	Yes	Caribou	50	Foraging	N/A	1000	69	East	No	-96.31427	64.82772	N/A	N/A	No	Exceeded!!	Speed restrction was put in place Road was restricted access
Road	2024-01-03	Yes	Caribou	13	Foraging	N/A	200	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-04	Yes	Caribou	25	Foraging	N/A	1000	61	West	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-04	Yes	Caribou	27	Foraging	N/A	100	47	West	No	-96.34656	64.65799	N/A	N/A	No	Exceeded!!	Speed restriction was put in place Road was restricted access
Incidental	2024-01-04	Yes	Caribou	12	Foraging	N/A	1000	71	East	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-05	Yes	Caribou	34	Resting	N/A	800	69	East	No	-96.31427	64.82772	N/A	N/A	No	Exceeded!!	Restriction for now.
Road	2024-01-05	Yes	Caribou	13	Walking	N	200	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	Road was restricted access
Road	2024-01-05	Yes	Caribou	13	Foraging	N/A	150	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	Road was restricted access
Incidental	2024-01-05	Yes	Caribou	24	Foraging	N	800	22	West,East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-05	Yes	Caribou	14	Foraging	N/A	100	26	West	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-05	Yes	Caribou	1	Dead	N/A	2	92	East	No	-96.16146	64.52353	N/A	Project related	No	Not Exceeded	N/A
Road	2024-01-06	Yes	Caribou	15	Foraging	N/A	1000	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-06	Yes	Caribou	89	Foraging	NE	300	67	East	No	-96.3262	64.81233	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-01-06	Yes	Caribou	24	Foraging	N/A	90	56	Both	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-06	Yes	Caribou	11	Foraging	N/A	100	46	Both	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-06	Yes	Caribou	152	Walking	E	0	14	East	Yes	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road section was closed to allow the caribou were crossed. Group was monitored until they were further than 3000 m away and were continuing E. Speed Restriction was left in place.
Road	2024-01-07	Yes	Caribou	12	Foraging	N/A	100	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-07	Yes	Caribou	12	Foraging	N/A	100	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-07	Yes	Muskox	5	Foraging	N/A	300	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-07	Yes	Caribou	5	Foraging	N/A	950	65	East	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-07	Yes	Caribou	19	Foraging	N/A	290	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-08	Yes	Caribou	33	Foraging	N/A	310	46	West	No	-96.32957	64.65622	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-01-08	Yes	Caribou	11	Foraging	N/A	70	5	West	No	-95.99998	64.35657	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-09	Yes	Caribou	12	Foraging	N/A	50	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-09	Yes	Caribou	8	Lying Down	N/A	600	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-09	Yes	Caribou	40	Foraging	N/A	1600	54	West	No	-96.35835	64.71319	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-01-09	Yes	Caribou	12	Foraging	N/A	280	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-09	Yes	Caribou	11	Foraging	N/A	300	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-10	Yes	Caribou	2	Foraging	N/A	900	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-10	Yes	Muskox	7	Foraging	N/A	900	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-10	Yes	Caribou	14	Foraging	N/A	5	56	Both	Yes	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-10	Yes	Caribou	13	Lying Down	N/A	300	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-10	Yes	Caribou	32	Walking	NW	20	13	West	N/A	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-01-11	Yes	Muskox	7	Lying Down	N/A	97	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-11	Yes	Caribou	13	Foraging	N/A	3	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-11	Yes	Caribou	12	Foraging	N/A	400	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-11	Yes	Caribou	1	Foraging	N/A	900	38	East	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-11	Yes	Caribou	43	Foraging	N/A	1000	15	West	No	-96.0525	64.43981	N/A	N/A	No	Exceeded!!	Speed restriction was put in place and the group was monitored. The group was last observed walking west at about 2 km from the road.
Road	2024-01-12	Yes	Caribou	4	Foraging	N/A	100	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-12	Yes	Caribou	49	Foraging	N/A	300	52	West	No	-96.37745	64.70086	N/A	N/A	No	Exceeded!!	Restriction for now. Till i go back north bound
Road	2024-01-12	Yes	Caribou	4	Foraging	N/A	280	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-12	Yes	Caribou	21	Foraging	N/A	270	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-12	Yes	Caribou	28	Foraging	N/A	320	45	West	No	-96.31336	64.65243	N/A	N/A	No	Exceeded!!	Speed restriction and road is closed to light vehicles and reduced tankers of 50%
Incidental	2024-01-12	Yes	Caribou	62	Foraging	N/A	900	46	West	No	-96.32957	64.65622	N/A	N/A	No	Exceeded!!	Restriction. Closed for light vehicles and reduced the tankers of 50%
Road	2024-01-17	Yes	Caribou	13	Foraging	N/A	1000	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	15	Foraging	SW	1000	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Muskox	6	Foraging	N/A	100	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	15	Foraging	N/A	10	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	11	Foraging	N/A	1000	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	2	Foraging	S	1000	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	7	Foraging	N/A	300	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	10	Foraging	N/A	1000	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	15	Foraging	SW	50	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Caribou	27	Walking	SW	100	17	West	No	-96.07705	64.45326	N/A	N/A	No	Exceeded!!	Speed restriction 20 km/h km 16-18 Dispatch notified, road was restricted to only essential vehicles at the start of shift, at 13:54 road was closed due to reduced visibility.

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-01-18	Yes	Muskox	5	Lying Down	N/A	300	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-18	Yes	Caribou	8	Foraging	N/A	300	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-18	Yes	Caribou	2	Foraging	N/A	160	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-18	Yes	Caribou	27	Foraging	N/A	200	45	West	No	-96.31336	64.65243	N/A	N/A	No	Exceeded!!	Restriction and limited traffic
Road	2024-01-18	Yes	Caribou	2	Walking	NE	1500	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-19	Yes	Muskox	6	Resting	N/A	150	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-19	Yes	Caribou	9	Foraging	N/A	200	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-19	Yes	Caribou	2	Walking	E	300	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-19	Yes	Caribou	15	Foraging	N/A	200	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-19	Yes	Caribou	9	Foraging	N/A	600	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-19	Yes	Caribou	2	Walking	E	1500	25	East	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-19	Yes	Caribou	6	Walking	NW	400	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-20	Yes	Caribou	4	Walking	N	350	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-20	Yes	Muskox	6	Foraging	N/A	100	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-20	Yes	Muskox	15	Foraging	N/A	2000	89	West	No	-96.21956	64.96744	N/A	N/A	No	Exceeded!!	Outside the 1.5 km range
Road	2024-01-20	Yes	Caribou	2	Foraging	N/A	400	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-20	Yes	Caribou	4	Walking	W	200	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-20	Yes	Caribou	16	Lying Down	N/A	750	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-20	Yes	Caribou	6	Foraging	N/A	100	50	West	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-20	Yes	Caribou	3	Walking	E	300	51	East	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-20	Yes	Caribou	17	Foraging	N/A	25	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-20	Yes	Arctic fox	1	Walking	E	5	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-20	Yes	Arctic fox	1	Walking	W	10	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Caribou	3	Foraging	N/A	400	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Caribou	21	Foraging	N/A	200	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Caribou	6	Foraging	N/A	200	50	West	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Caribou	4	Foraging	W	300	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Caribou	14	Foraging	N/A	100	56	Both	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Muskox	22	Foraging	N/A	1000	91	West	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Muskox further than 500 m from the road
Road	2024-01-22	Yes	Caribou	7	Feeding	N/A	75	106	West	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-22	Yes	Caribou	10	Feeding	N/A	10	57	East	N/A	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-22	Yes	Caribou	8	Walking	E	50	52	East	N/A	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-22	Yes	Caribou	6	Walking	W	100	50	West	N/A	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-22	Yes	Caribou	2	Feeding	E	200	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-23	Yes	Muskox	6	Foraging	N/A	1200	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-23	Yes	Caribou	14	Foraging	N/A	75	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-23	Yes	Caribou	22	Resting	N/A	300	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-23	Yes	Caribou	5	Resting	N/A	800	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-23	Yes	Caribou	4	Foraging	N/A	400	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-23	Yes	Caribou	2	Foraging	N/A	50	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-24	Yes	Ptarmigan	1	Walking	W	50	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-24	Yes	Caribou	13	Foraging	N/A	50	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-24	Yes	Caribou	15	Walking	E	50	54	Both	Yes	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-24	Yes	Caribou	4	Foraging	N/A	100	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-24	Yes	Caribou	7	Foraging	N/A	100	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-24	Yes	Caribou	3	Foraging	N/A	400	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-25	Yes	Caribou	10	Foraging	W	200	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-25	Yes	Caribou	8	Foraging	N/A	100	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-25	Yes	Caribou	7	Foraging	N/A	100	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-25	Yes	Caribou	5	Foraging	N/A	800	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	3	Foraging	N/A	650	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	7	Foraging	N/A	150	46	West	N/A	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	7	Foraging	N/A	50	47	West	N/A	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	5	Foraging	N/A	50	49	West	N/A	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	5	Lying Down	N/A	100	54	West	N/A	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	9	Foraging	N/A	25	58	West	N/A	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-26	Yes	Caribou	3	Lying Down	N/A	100	101	West	N/A	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-28	Yes	Caribou	11	Lying Down	N/A	100	47	West	N/A	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-28	Yes	Caribou	6	Lying Down	N/A	300	57	West	N/A	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-28	Yes	Common raven	1	Flying	N/A	5	69	West	N/A	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-28	Yes	Muskox	6	Foraging	N/A	25	93	East	N/A	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-30	Yes	Caribou	2	Foraging	N/A	300	93	East	N/A	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-30	Yes	Caribou	12	Walking	S	500	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-30	Yes	Caribou	8	Foraging	N/A	25	58	West	N/A	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-30	Yes	Caribou	10	Foraging	N/A	50	48	West	N/A	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-30	Yes	Caribou	2	Foraging	N/A	500	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-30	Yes	Muskox	8	Lying Down	N/A	100	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-30	Yes	Caribou	4	Lying Down	N/A	500	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-31	Yes	Caribou	39	N/A	N/A	N/A	52	N/A	No	N/A	N/A	N/A	N/A	No	Exceeded!!	Road was restricted access
Road	2024-02-01	Yes	Caribou	19	Walking	S	1500	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-01	Yes	Caribou	4	Foraging	N/A	500	97	West	N/A	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-02-01	Yes	Caribou	34	Foraging	N/A	1600	89	West	N/A	-96.21956	64.96744	N/A	N/A	No	Exceeded!!	Caribou are 1500 m away from road
Road	2024-02-01	Yes	Caribou	5	Foraging	N/A	0	58	East	Yes	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-01	Yes	Ptarmigan	4	Walking	E	5	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-01	Yes	Caribou	9	Lying Down	N/A	100	57	East	N/A	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-01	Yes	Caribou	7	Foraging	N/A	1300	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-01	Yes	Caribou	8	Lying Down	N/A	1000	46	West	N/A	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-01	Yes	Caribou	2	Foraging	N/A	900	46	West	N/A	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-01	Yes	Caribou	3	Foraging	N/A	100	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-01	Yes	Caribou	13	Foraging	N/A	100	56	East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-01	Yes	Caribou	18	Foraging	N/A	1000	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	17	Foraging	N/A	1000	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	4	Foraging	N/A	1000	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	8	Lying Down	N/A	800	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	4	Lying Down	N/A	400	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	12	Foraging	N	1000	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	7	Foraging	N/A	300	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	6	Foraging	N/A	400	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	1	Foraging	N/A	400	107	East	No	-96.07193	65.02338	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-03	Yes	Caribou	12	Walking	N	0	97	Both	Yes	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-05	Yes	Caribou	25	Lying Down	N/A	350	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-05	Yes	Caribou	15	Foraging	N/A	150	50	East	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-05	Yes	Caribou	2	Foraging	N/A	280	47	East	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-05	Yes	Caribou	15	Foraging	N/A	500	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-05	Yes	Caribou	6	Walking	SE	0	33	East	Yes	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-06	Yes	Caribou	23	Foraging	N/A	300	59	East	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-07	Yes	Wolf	2	Walking	Not Recorded	0	73	North	Yes	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-07	Yes	Caribou	4	Foraging	N/A	120	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-07	Yes	Caribou	15	Foraging	N/A	100	57	West	Yes	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-07	Yes	Wolverine	1	Trotting/running	E	200	51	East	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-07	Yes	Caribou	15	Foraging	N/A	300	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-07	Yes	Caribou	10	Foraging	N/A	400	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-08	Yes	Caribou	8	Foraging	N/A	400	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-08	Yes	Caribou	4	Foraging	N/A	400	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-08	Yes	Caribou	21	Foraging	N/A	360	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	Speed restriction
Road	2024-02-08	Yes	Caribou	2	Foraging	S	60	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-08	Yes	Caribou	4	Lying Down	N/A	200	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-09	Yes	Caribou	4	Foraging	N/A	280	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-09	Yes	Caribou	3	Foraging	N/A	300	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-09	Yes	Caribou	4	Foraging	NW	800	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-09	Yes	Caribou	7	Foraging	N/A	360	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-09	Yes	Caribou	27	Lying Down	N/A	300	56	West	No	-96.35139	64.72588	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-02-09	Yes	Caribou	10	Foraging	N/A	300	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-09	Yes	Caribou	6	Foraging	N/A	50	50	West	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-10	Yes	Caribou	3	Lying Down	N/A	190	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-10	Yes	Caribou	12	Foraging	N/A	400	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-10	Yes	Caribou	27	Lying Down	N/A	90	57	Both	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-02-10	Yes	Caribou	8	Foraging	N/A	300	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-10	Yes	Caribou	3	Foraging	N/A	110	50	West	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-10	Yes	Caribou	28	Lying Down	N/A	600	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-02-10	Yes	Caribou	4	Foraging	N/A	200	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-10	Yes	Caribou	28	Foraging	N/A	190	55	West,East	No	-96.34597	64.71855	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-02-10	Yes	Caribou	30	Foraging	N/A	600	57	West	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-02-10	Yes	Caribou	4	Foraging	N/A	140	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-11	Yes	Caribou	8	Foraging	N/A	120	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-11	Yes	Caribou	6	Foraging	N/A	120	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-14	Yes	Caribou	6	Foraging	N/A	400	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-14	Yes	Caribou	2	Resting	N/A	5	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-14	Yes	Arctic hare	1	Resting	N/A	0	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-14	Yes	Caribou	7	Foraging	N/A	300	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-14	Yes	Caribou	6	Foraging	N/A	250	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-15	Yes	Caribou	9	Foraging	N/A	300	53	East	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-16	Yes	Muskox	8	Foraging	N/A	750	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-16	Yes	Ptarmigan	7	Walking	W	10	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-16	Yes	Caribou	11	Foraging	N/A	100	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-16	Yes	Caribou	9	Foraging	N/A	1000	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-16	Yes	Caribou	4	Foraging	E	350	35	East	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-16	Yes	Caribou	11	Foraging	N/A	1250	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-16	Yes	Caribou	16	Foraging	N/A	50	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Caribou	6	Foraging	N/A	50	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Muskox	19	Foraging	N/A	50	91	East	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-02-18	Yes	Muskox	29	Foraging	N/A	500	91	West	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction 30 km

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-02-18	Yes	Caribou	6	Foraging	N/A	500	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Arctic fox	1	Walking	W	100	66	West	No	-96.33501	64.80451	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Arctic fox	1	Feeding	N/A	50	56	East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Caribou	17	Foraging	N/A	50	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Caribou	24	Foraging	N/A	2000	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Caribou	14	Foraging	N/A	825	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-18	Yes	Caribou	4	Walking	E	150	35	East	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-18	Yes	Caribou	11	Foraging	N/A	850	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-18	Yes	Caribou	3	Walking	N	300	34	West	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-18	Yes	Caribou	1	Foraging	N/A	100	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-18	Yes	Caribou	10	Walking	E	50	35	East	Yes	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-18	Yes	Caribou	7	Walking	N	320	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-20	Yes	Caribou	35	Foraging	N/A	200	97	West	N/A	-96.17115	65.02594	N/A	N/A	No	Exceeded!!	Speed restriction from km 96-98. No more light vehicles on the road.
Road	2024-02-20	Yes	Caribou	10	Foraging	N/A	100	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-20	Yes	Caribou	25	Lying Down	W	300	54	West	N/A	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-20	Yes	Caribou	7	Foraging	N/A	75	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-20	Yes	Caribou	9	Foraging	N/A	50	34	East	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-20	Yes	Caribou	7	Walking	W	300	34	West	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-20	Yes	Ptarmigan	3	Walking	N/A	150	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-20	Yes	Muskox	14	Resting	N/A	1000	92	East	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Group is further than 500 m from the road
Road	2024-02-21	Yes	Caribou	8	Foraging	N/A	100	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-21	Yes	Caribou	2	Foraging	N/A	50	57	East	N/A	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-21	Yes	Caribou	66	Lying Down	N/A	2000	53	West	N/A	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	They're outside of the 1.5 km range
Incidental	2024-02-21	Yes	Arctic hare	2	Running	S	50	45	East	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-21	Yes	Caribou	5	Foraging	N/A	250	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-21	Yes	Caribou	8	Lying Down	N/A	100	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-22	Yes	Caribou	12	Foraging	N/A	10	56	West,East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-22	Yes	Caribou	15	Foraging	N/A	20	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-23	Yes	Caribou	8	Foraging	N/A	150	97	West	Yes	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-23	Yes	Caribou	4	Foraging	N/A	150	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-23	Yes	Wolf	2	Trotting/running	E	400	48	East	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-23	Yes	Caribou	4	Foraging	E	50	37	East	Yes	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-23	Yes	Caribou	7	Walking	N	400	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-23	Yes	Caribou	25	Foraging	N/A	50	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-23	Yes	Caribou	8	Foraging	N/A	1200	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	6	Lying Down	N/A	100	57	West	Yes	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	2	Foraging	E	100	57	East	Yes	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	1	Foraging	N/A	60	56	West	N/A	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	1	Foraging	N/A	300	53	East	N/A	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	6	Lying Down	N/A	1000	48	West	N/A	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	1	Running	SW	300	33	West	Yes	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-25	Yes	Caribou	43	Foraging	N/A	2000	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Caribou are further than 1.5 km from road
Incidental	2024-02-25	Yes	Caribou	19	Foraging	W	25	56	East	Yes	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-25	Yes	Caribou	3	Foraging	N/A	75	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-25	Yes	Caribou	9	Foraging	NW	25	96	West	Yes	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-27	Yes	Caribou	8	Feeding	N	800	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-27	Yes	Caribou	13	Feeding	SW	600	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-27	Yes	Caribou	17	Walking	W	150	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-28	Yes	Wolf	1	Not recorded	Not Recorded	1000	42	East	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-29	Yes	Caribou	6	Foraging	N/A	500	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-29	Yes	Muskox	16	Foraging	N/A	350	93	East	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Speed restriction restriction put in place km 90-93
Incidental	2024-02-29	Yes	Muskox	14	Lying Down	N/A	10	91	East	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction put in place km 90-93
Incidental	2024-02-29	Yes	Muskox	41	Lying Down	N/A	500	91	West	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction put in place km 90-93
Road	2024-03-01	Yes	Caribou	5	Walking	E	900	38	East	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Caribou	15	Foraging	N/A	300	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Caribou	3	Foraging	N/A	500	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Caribou	3	Walking	W	100	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Caribou	3	Foraging	N/A	80	56	Both	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Muskox	43	Lying Down	N/A	250	91	West	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed reduction in place km 91-93
Road	2024-03-01	Yes	Muskox	4	Feeding	N/A	50	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Muskox	12	Feeding	N/A	1000	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-01	Yes	Arctic fox	1	Walking	S	10	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-02	Yes	Caribou	16	Running	E	0	12	East	Yes	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	Speed restriction
Road	2024-03-03	Yes	Caribou	3	Foraging	N/A	180	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-03	Yes	Caribou	2	Lying Down	N/A	150	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-03	Yes	Muskox	55	Foraging	N/A	20	93	Both	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-03	Yes	Caribou	7	Foraging	N/A	300	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-03	Yes	Caribou	10	Foraging	N/A	400	12	West	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-03-03	Yes	Caribou	5	Foraging	N/A	200	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-03	Yes	Caribou	3	Lying Down	N/A	200	37	East	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-03-03	Yes	Caribou	33	Foraging	N/A	170	51	West	No	-96.37907	64.69323	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-03	Yes	Caribou	34	Foraging	N	1000	59	West	No	-96.37059	64.74953	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-04	Yes	Caribou	35	Foraging	N/A	90	51	West	No	-96.37907	64.69323	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-04	Yes	Caribou	73	Foraging	N/A	200	52	West	No	-96.37745	64.70086	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-04	Yes	Muskox	55	Foraging	N/A	20	93	West,East	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Restriction 5 km
Road	2024-03-04	Yes	Muskox	15	Foraging	N/A	100	96	East	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-04	Yes	Caribou	5	Walking	N	980	67	East	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-04	Yes	Caribou	133	Foraging	S	100	53	Both	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-05	Yes	Muskox	15	Foraging	N/A	100	97	East	No	-96.17115	65.02594	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-05	Yes	Caribou	10	Foraging	N/A	1100	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-05	Yes	Caribou	8	Lying Down	N/A	100	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-05	Yes	Caribou	5	Foraging	N/A	1000	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-05	Yes	Caribou	79	Foraging	N/A	300	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Restriction, limited traffic
Road	2024-03-05	Yes	Caribou	11	Lying Down	N/A	200	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-05	Yes	Caribou	70	Foraging	N/A	10	57	Both	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	Restrictions
Incidental	2024-03-05	Yes	Caribou	94	Foraging	Not Recorded	300	103	West	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Speed restriction Road was limited access
Incidental	2024-03-05	Yes	Caribou	9	Foraging	N/A	1000	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-05	Yes	Wolf	3	Hunting	S	900	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-05	Yes	Caribou	2	Walking	N	280	81	East	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-05	Yes	Caribou	10	Walking	N	1100	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-06	Yes	Caribou	9	Foraging	N/A	190	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-06	Yes	Muskox	10	Foraging	N/A	60	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-06	Yes	Muskox	57	Foraging	N/A	20	92	Both	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Restriction 10 km/h
Road	2024-03-06	Yes	Caribou	81	Foraging	N/A	0	54	Both	Yes	-96.35835	64.71319	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-06	Yes	Caribou	2	Foraging	N/A	290	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-06	Yes	Caribou	8	Walking	E	300	22	West	Yes	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-06	Yes	Caribou	6	Foraging	N/A	190	53	East	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-06	Yes	Muskox	55	Foraging	N/A	20	92	West,East	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-07	Yes	Caribou	15	Foraging	N/A	290	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-08	Yes	Caribou	8	Foraging	N/A	250	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-08	Yes	Caribou	17	Lying Down	N/A	160	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-08	Yes	Caribou	10	Lying Down	N/A	170	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-08	Yes	Caribou	69	Foraging	N/A	290	89	West	No	-96.21956	64.96744	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-08	Yes	Muskox	15	Foraging	N/A	40	95	Both	No	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Caribou	2	Lying Down	N/A	130	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-09	Yes	Caribou	26	Lying Down	N/A	150	50	Both	No	-96.3731	64.67942	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Caribou	46	Lying Down	N/A	350	53	East	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Caribou	12	Foraging	N/A	280	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-09	Yes	Caribou	71	Lying Down	N/A	700	92	West	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Muskox	57	Foraging	N/A	1000	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Caribou	37	Lying Down	N/A	370	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Muskox	15	Foraging	N/A	30	95	Both	Yes	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-09	Yes	Caribou	5	Foraging	N/A	190	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-13	Yes	Caribou	6	Foraging	N/A	500	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-13	Yes	Caribou	19	Foraging	N/A	150	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-13	Yes	Caribou	20	Foraging	N/A	900	38	East	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-13	Yes	Caribou	6	Walking	N	870	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-13	Yes	Caribou	16	Foraging	N/A	1000	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-13	Yes	Caribou	15	Walking	W	0	9	East	Yes	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-13	Yes	Caribou	1	Walking	S	700	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-13	Yes	Caribou	4	Foraging	N/A	800	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-14	Yes	Caribou	20	Foraging	Not Recorded	150	56	West,East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	Speed Restriction
Road	2024-03-15	Yes	Caribou	134	Foraging	N	1000	65	West	No	-96.34062	64.7948	N/A	N/A	No	Exceeded!!	Speed restriction 5 km/h. Road restriction also in effect.
Road	2024-03-15	Yes	Caribou	12	Foraging	N/A	50	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-15	Yes	Caribou	4	Foraging	N/A	50	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-15	Yes	Caribou	97	Walking	NW	750	35	West	No	-96.24426	64.57386	N/A	N/A	No	Exceeded!!	Speed restriction 5 km/h. Road restriction also in effect.
Incidental	2024-03-15	Yes	Caribou	25	Resting	N/A	750	25	East	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-15	Yes	Caribou	75	Foraging	N	1500	64	West	No	-96.34001	64.78668	N/A	N/A	No	Exceeded!!	Road restricted
Road	2024-03-16	Yes	Caribou	18	Foraging	N/A	50	57	Both	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-16	Yes	Caribou	7	Walking	W	500	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-16	Yes	Caribou	40	Walking	W	750	36	West	No	-96.26192	64.58043	N/A	N/A	No	Exceeded!!	Road was limited access
Road	2024-03-16	Yes	Common raven	4	Resting	N/A	5	16	Both	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-16	Yes	Caribou	18	Resting	N/A	500	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-18	Yes	Muskox	7	Foraging	N/A	150	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-18	Yes	Caribou	14	Foraging	N/A	10	57	Both	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-18	Yes	Arctic hare	1	Foraging	N/A	10	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-18	Yes	Caribou	3	Foraging	N/A	150	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-18	Yes	Arctic fox	1	Running	SE	100	50	East	Yes	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-18	Yes	Muskox	57	Foraging	N/A	1000	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Muskox are beyond 500 m
Incidental	2024-03-18	Yes	Caribou	3	Foraging	N/A	50	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-19	Yes	Caribou	25	Foraging	W	150	56	Both	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-03-19	Yes	Caribou	6	Lying Down	N/A	150	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-19	Yes	Caribou	5	Lying Down	W	150	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-19	Yes	Caribou	10	Lying Down	N/A	300	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-19	Yes	Caribou	5	Walking	S	300	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-22	Yes	Muskox	14	Lying Down	N/A	2000	92	East	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Muskox are 2000 m away from road
Road	2024-03-22	Yes	Caribou	6	Foraging	N/A	75	53	East	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-22	Yes	Caribou	2	Lying Down	N/A	150	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-22	Yes	Arctic fox	1	Running	N	0	107	East	Yes	-96.07193	65.02338	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-23	Yes	Caribou	6	Lying Down	N/A	400	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-23	Yes	Caribou	7	Lying Down	N/A	200	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-23	Yes	Caribou	3	Foraging	N/A	300	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-23	Yes	Caribou	4	Walking	N	400	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-23	Yes	Caribou	5	Trotting/running	N	250	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-23	Yes	Caribou	6	Walking	W	250	16	West	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-23	Yes	Caribou	2	Walking	N	200	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-24	Yes	Caribou	6	Walking	W	150	107	West	No	-96.07193	65.02338	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-24	Yes	Caribou	4	Walking	E	0	98	West	Yes	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-25	Yes	Caribou	14	Walking	NE	2000	79	East	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-25	Yes	Caribou	65	Foraging	N/A	2200	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	The caribou are more than 2 km away
Road	2024-03-25	Yes	Ptarmigan	6	Resting	N/A	5	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-25	Yes	Caribou	34	Walking	SW	200	37	West	No	-96.269	64.58416	N/A	N/A	No	Exceeded!!	Speed restriction 5 km/h and restricted traffic
Road	2024-03-25	Yes	Caribou	9	Walking	W	800	33	West	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-25	Yes	Caribou	2	Foraging	N/A	700	29	East	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-25	Yes	Muskox	3	Foraging	N/A	500	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-25	Yes	Caribou	7	Walking	S	500	29	West	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-25	Yes	Caribou	59	Foraging	N/A	1200	92	West	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Speed restriction km 91-93 30 km/h. Traffic restricted
Incidental	2024-03-25	Yes	Muskox	8	Lying Down	N/A	350	94	East	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-25	Yes	Arctic hare	1	Foraging	N/A	10	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-26	Yes	Caribou	146	Foraging	N/A	600	95	West	No	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Speed restriction km 92-96 20 km/h Road was restricted access
Road	2024-03-26	Yes	Caribou	5	Lying Down	N/A	150	44	East	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-26	Yes	Caribou	10	Foraging	N/A	600	37	West	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-26	Yes	Caribou	9	Walking	SW	800	31	West	No	-96.19574	64.55426	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-26	Yes	Caribou	63	Lying Down	N	300	29	West	No	-96.18125	64.54733	N/A	N/A	No	Exceeded!!	Speed restriction km 28-30 20 km/h Road was restricted access
Road	2024-03-26	Yes	Muskox	3	Foraging	N/A	500	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-26	Yes	Caribou	4	Lying Down	N/A	1000	14	East	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-26	Yes	Caribou	12	Lying Down	N/A	2200	9	East	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-26	Yes	Caribou	3	Foraging	N/A	170	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-26	Yes	Caribou	7	Foraging	N/A	140	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-26	Yes	Caribou	183	Foraging	N	880	91	West	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction km 89-95 Road was restricted access
Incidental	2024-03-26	Yes	Muskox	50	Foraging	N/A	990	91	East	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-26	Yes	Caribou	8	Foraging	N/A	100	106	West	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-27	Yes	Caribou	30	Foraging	N/A	870	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-27	Yes	Caribou	119	Lying Down	N/A	880	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-27	Yes	Caribou	30	Foraging	N/A	40	57	West	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-27	Yes	Caribou	37	Lying Down	N/A	380	31	West	No	-96.19574	64.55426	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-27	Yes	Caribou	211	Walking	S	800	27	West	No	-96.16125	64.53222	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-27	Yes	Caribou	35	Foraging	N/A	500	19	West	No	-96.0866	64.4702	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-28	Yes	Caribou	15	Foraging	N/A	390	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-28	Yes	Caribou	15	Walking	S	800	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-28	Yes	Caribou	50	Walking	S	280	47	West	No	-96.34656	64.65799	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-28	Yes	Caribou	28	Walking	S	390	45	West	No	-96.31336	64.65243	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-03-28	Yes	Caribou	10	Foraging	N/A	390	37	West	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-28	Yes	Caribou	11	Walking	NE	900	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-28	Yes	Caribou	2	Foraging	S	600	31	West	No	-96.19574	64.55426	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-28	Yes	Caribou	154	Lying Down	N/A	1100	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Restriction
Incidental	2024-03-28	Yes	Caribou	3	Lying Down	N/A	300	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-28	Yes	Caribou	10	Foraging	N/A	100	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-28	Yes	Caribou	5	Foraging	N/A	5	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-29	Yes	Caribou	3	Foraging	Not Recorded	300	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	Road was limited access
Road	2024-03-30	Yes	Caribou	300	Foraging	Not Recorded	1500	57	West	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-04-02	Yes	Caribou	48	N/A	N/A	0	69	West	Yes	N/A	N/A	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-03	Yes	Caribou	12	Lying Down	N/A	500	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-03	Yes	Caribou	150	N/A	N/A	1000	103	West	No	N/A	N/A	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-05	Yes	Caribou	94	N/A	N/A	300	103	West	No	N/A	N/A	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-07	Yes	Muskox	17	Foraging	N/A	10	95	East	No	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Road Closed
Road	2024-04-07	Yes	Caribou	2	Foraging	N/A	100	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Caribou	6	Foraging	N/A	600	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Caribou	10	Foraging	N/A	100	28	East	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Muskox	3	Foraging	N/A	20	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Muskox	1	Standing	N/A	50	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-07	Yes	Caribou	4	Walking	NE	2	37	West	Yes	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-04-07	Yes	Caribou	102	Walking	N	1000	49	West	No	-96.37072	64.6688	N/A	N/A	No	Exceeded!!	Road closed for migration
Incidental	2024-04-07	Yes	Caribou	49	Foraging	S	40	101	West	No	-96.14029	65.05669	N/A	N/A	No	Exceeded!!	Road Closed
Incidental	2024-04-07	Yes	Caribou	5	Foraging	N/A	50	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-07	Yes	Caribou	8	Foraging	N/A	900	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	10	Foraging	N/A	700	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	7	Foraging	N/A	15	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	20	Running	NW	500	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	18	Walking	SW	800	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	2	Walking	N	500	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	2	Foraging	N/A	300	38	East	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-10	Yes	Caribou	126	Foraging	Not Recorded	300	93	East	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Road Closed
Incidental	2024-04-10	Yes	Caribou	20	Walking	N	200	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-11	Yes	Caribou	2	Walking	N	350	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-11	Yes	Rough-legged-Hawk	1	Resting	N/A	25	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-11	Yes	Common raven	2	Resting	N/A	100	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Caribou	80	Foraging	Not Recorded	5000	35	West	No	-96.24426	64.57386	N/A	N/A	No	Exceeded!!	Road Closed
Road	2024-04-12	Yes	Caribou	1	Foraging	N/A	50	106	West	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-12	Yes	Muskox	15	Foraging	N/A	25	94	Both	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Speed restriction 93 to 96 30 km/h
Road	2024-04-12	Yes	Arctic hare	4	Standing	N/A	15	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-12	Yes	Caribou	4	Walking	E	500	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-12	Yes	Caribou	3	Walking	E	1000	26	East	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-12	Yes	Caribou	7	Foraging	N/A	100	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-14	Yes	Caribou	5	Lying Down	N/A	200	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-14	Yes	Caribou	13	Foraging	N/A	150	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-14	Yes	Caribou	18	Foraging	N/A	600	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-14	Yes	Muskox	17	Foraging	N/A	300	92	East	No	-96.22191	64.99435	N/A	N/A	No	Exceeded!!	Speed restriction km 91-93 30 km/h
Incidental	2024-04-14	Yes	Caribou	2	Foraging	N/A	200	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	66	Walking	NW	1000	82	West	No	-96.31204	64.9306	N/A	N/A	No	Exceeded!!	Speed restriction km82-83 30km/h
Road	2024-04-15	Yes	Caribou	20	Lying Down	N/A	500	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Ptarmigan	2	Flying	E	50	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-15	Yes	Caribou	22	Walking	N/A	700	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-15	Yes	Muskox	11	Foraging	N/A	1000	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-15	Yes	Caribou	12	Lying Down	N/A	150	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-16	Yes	Caribou	5	Walking	N	100	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-16	Yes	Ptarmigan	8	Resting	E	5	45	East	Yes	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-16	Yes	Ptarmigan	1	Flying	W	100	37	West	Yes	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-16	Yes	Ptarmigan	4	Flying	NE	20	6	Both	Yes	-96.00083	64.36427	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Caribou	8	Walking	SW	500	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Caribou	11	Lying Down	N/A	900	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Caribou	9	Lying Down	N/A	200	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Muskox	17	Foraging	N/A	500	91	East	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction km 90-92 30 km/h
Road	2024-04-17	Yes	Caribou	6	Foraging	N	150	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Ptarmigan	17	Flying	SE	0	40	East	Yes	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Rough-legged-Hawk	1	Flying	SW	10	40	West	Yes	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Caribou	5	Foraging	N	40	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Caribou	66	Lying Down	N/A	1600	77	West	No	-96.33908	64.89511	N/A	N/A	No	Exceeded!!	Speed restriction, road closure, and convoy assistance
Incidental	2024-04-17	Yes	Muskox	17	Lying Down	N/A	750	91	East	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Speed restriction km 91-92 30 km/h
Road	2024-04-18	Yes	Caribou	3	Foraging	N/A	200	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-18	Yes	Caribou	97	Foraging	N	500	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Road closure and speed restriction for convoy. Km 92-95
Road	2024-04-18	Yes	Caribou	7	Walking	N	600	76	West	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-18	Yes	Caribou	4	Foraging	N/A	150	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-18	Yes	Caribou	18	Fleeing	N	1000	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-18	Yes	Caribou	5	Foraging	N/A	74	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-18	Yes	Arctic fox	1	Resting	N/A	1	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-18	Yes	Caribou	8	Foraging	N/A	100	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-18	Yes	Caribou	73	Foraging	E	1800	86	West	No	-96.2528	64.94684	N/A	N/A	No	Exceeded!!	Road closure and speed restriction
Incidental	2024-04-18	Yes	Caribou	138	Foraging	E	300	89	West	No	-96.21956	64.96744	N/A	N/A	No	Exceeded!!	Speed restriction and road closure
Road	2024-04-19	Yes	Caribou	6	Feeding	E	100	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	4	Foraging	W	25	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	29	Foraging	NW	700	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	57	Trotting/running	W	750	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	AWAR CLOSED TO REGULAR TRAFFIC
Road	2024-04-19	Yes	Caribou	19	Walking	NW	1000	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	8	Foraging	SW	150	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	23	Foraging	N/A	1000	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	23	Lying Down	N/A	600	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	12	Walking	SW	300	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Arctic hare	3	Lying Down	N/A	5	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	4	Foraging	E	750	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Arctic fox	1	Lying Down	N/A	1	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	2	Standing	N/A	500	37	East	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-04-19	Yes	Caribou	13	Running	SW	35	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	2	Foraging	N/A	50	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	5	Walking	N	150	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-20	Yes	Caribou	12	Walking	SE	150	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-20	Yes	Arctic fox	1	Running	N	50	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-20	Yes	Caribou	2	Foraging	N/A	400	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	9	Lying Down	N/A	150	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	2	Feeding	N/A	200	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	2	Foraging	N/A	50	35	East	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Common raven	2	Flying	S	50	13	West	N/A	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Muskox	7	Lying Down	N/A	50	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	6	Foraging	E	150	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Ptarmigan	9	Walking	NE	100	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	2	Foraging	W	50	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-22	Yes	Caribou	16	Foraging	E	300	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Muskox	77	Foraging	N/A	2000	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	2000 m off of the road
Incidental	2024-04-23	Yes	Caribou	9	Foraging	Not Recorded	150	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	5	Walking	N	101	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	139	Foraging	Not Recorded	1000	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-23	Yes	Caribou	6	Foraging	Not Recorded	25	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	16	Foraging	E	0	99	West	Yes	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	6	Foraging	N	50	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	3	Foraging	N	500	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	60	Walking	N	600	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Speed restriction km 93-95 30 km/h
Road	2024-04-23	Yes	Caribou	26	Lying Down	N/A	700	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	4	Walking	NE	100	56	East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	3	Foraging	N/A	400	55	East	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Arctic fox	2	Resting	N/A	1	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	9	Foraging	N/A	50	102	Both	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	7	Standing	N/A	75	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	89	Standing	N/A	2500	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Off the road 2.5 km
Road	2024-04-24	Yes	Caribou	97	Foraging	N/A	2500	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	2.5 km off the road
Road	2024-04-24	Yes	Muskox	6	Standing	N/A	50	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	6	Foraging	N/A	75	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	4	Foraging	N/A	150	51	East	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Arctic fox	1	Lying Down	N/A	2	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Muskox	14	Resting	N/A	750	41	East	No	-96.28113	64.62028	N/A	N/A	No	Exceeded!!	750 m off the road
Road	2024-04-24	Yes	Caribou	2	Lying Down	N/A	700	37	East	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Muskox	9	Foraging	N/A	700	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Caribou	7	Lying Down	N/A	50	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Caribou	9	Foraging	N/A	100	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Muskox	6	Foraging	W	10	91	East	Yes	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	7	Lying Down	N/A	150	99	East	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	19	Lying Down	N/A	2200	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Muskox	6	Lying Down	N/A	50	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Arctic fox	1	Resting	N/A	1	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	1	Foraging	N/A	100	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	2	Foraging	N/A	100	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Arctic fox	1	Lying Down	N/A	1	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Arctic fox	1	Foraging	W	1	90	East	Yes	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Muskox	56	Lying Down	N/A	600	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Speed restriction km 92-94 10 km/h
Incidental	2024-04-25	Yes	Caribou	3	Walking	N	100	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Caribou	6	Foraging	N/A	30	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Caribou	6	Foraging	N/A	150	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Caribou	8	Walking	W	30	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Muskox	11	Walking	W	400	94	West	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-26	Yes	Caribou	3	Foraging	S	120	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-27	Yes	Caribou	10	Foraging	Not Recorded	100	106	West	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-28	Yes	Caribou	15	Foraging	N/A	390	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-28	Yes	Wolverine	1	Trotting/running	SW	0	70	East	Yes	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-28	Yes	Caribou	41	Foraging	NE	2000	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Closed
Incidental	2024-04-28	Yes	Caribou	7	Foraging	N/A	120	99	East	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-28	Yes	Caribou	5	Foraging	N/A	90	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-28	Yes	Caribou	14	Foraging	N/A	14	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Muskox	1	Foraging	N/A	900	7	West	No	-96.00916	64.37262	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Caribou	7	Foraging	N/A	700	63	West	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Caribou	12	Lying Down	N/A	1500	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Caribou	5	Lying Down	N/A	1000	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Caribou	4	Lying Down	N/A	40	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Caribou	2	Foraging	N/A	60	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-29	Yes	Caribou	1	Walking	E	15	101	West	Yes	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-04-29	Yes	Caribou	4	Foraging	N/A	30	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-29	Yes	Caribou	5	Foraging	N/A	700	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-29	Yes	Caribou	27	Walking	SW	1000	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-29	Yes	Arctic fox	1	Standing	N/A	1	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-29	Yes	Caribou	2	Foraging	N/A	400	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	4	Foraging	N/A	300	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	1	Foraging	N/A	300	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	7	Foraging	N/A	400	102	Both	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	6	Foraging	N/A	400	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	5	Foraging	N/A	500	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	7	Foraging	N/A	1000	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	15	Foraging	N/A	1500	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	5	Foraging	N/A	1500	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	2	Foraging	N/A	400	30	East	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Caribou	470	Foraging	E	0	101	West	Yes	-96.14029	65.05669	N/A	N/A	No	Exceeded!!	Road Closed
Incidental	2024-04-30	Yes	Caribou	15	Foraging	N/A	800	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Caribou	6	Walking	W	800	77	West	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Muskox	3	Foraging	N/A	800	89	East	N/A	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Caribou	8	Foraging	N/A	500	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Caribou	30	Foraging	N/A	800	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Caribou	21	Foraging	S	75	103	West,East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	2	Foraging	N/A	400	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	9	Walking	W	150	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	10	Walking	S	500	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	8	Walking	N	450	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	4	Foraging	W	1000	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	63	Walking	SW	400	47	West	No	-96.34656	64.65799	N/A	N/A	No	Exceeded!!	The road was put on a 20 km speed restiction then supervisor was consulted and then road was closed and everyone was sent to their home base.
Incidental	2024-05-01	Yes	Caribou	2	Foraging	Not Recorded	200	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	1	Standing	Not Recorded	600	37	West	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	13	Walking	W	200	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	19	Foraging	Not Recorded	1500	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	11	Foraging	Not Recorded	20	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	15	Foraging	Not Recorded	10	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	8	Foraging	Not Recorded	300	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	3	Foraging	Not Recorded	8	102	West	Yes	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-01	Yes	Caribou	14	Foraging	Not Recorded	10	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	15	Foraging	N/A	200	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	25	Walking	S	70	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	42	Foraging	N/A	200	98	West	No	-96.15765	65.03248	N/A	N/A	No	Exceeded!!	Closed
Incidental	2024-05-02	Yes	Caribou	33	Walking	S	100	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	43	Lying Down	N/A	990	69	East	No	-96.31427	64.82772	N/A	N/A	No	Exceeded!!	Closed
Incidental	2024-05-02	Yes	Caribou	20	Foraging	N/A	500	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	2	Foraging	N/A	140	2	East	No	-95.97432	64.33258	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	7	Foraging	S	110	37	West	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	29	Foraging	N/A	390	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	18	Foraging	N/A	200	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	4	Foraging	N/A	400	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	29	Foraging	N/A	60	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	10	Lying Down	N/A	10	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Caribou	20	Foraging	N/A	1700	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Caribou	14	Walking	S	390	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Caribou	2	Foraging	S	1900	65	West	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Caribou	8	Walking	E	30	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Caribou	62	Foraging	Not Recorded	150	80	West	No	-96.30624	64.91707	N/A	N/A	No	Exceeded!!	Road Closed
Road	2024-05-04	Yes	Caribou	73	Foraging	W	500	91	West	No	-96.22486	64.98469	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-05-04	Yes	Caribou	25	Lying Down	N/A	300	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-04	Yes	Caribou	2	Foraging	SE	110	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-04	Yes	Caribou	3	Foraging	N/A	2000	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-04	Yes	Caribou	2	Foraging	N/A	2400	65	West	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-04	Yes	Caribou	20	Foraging	SE	2400	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-04	Yes	Caribou	14	Foraging	N/A	230	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-05	Yes	Caribou	42	Foraging	N/A	130	100	West	No	-96.14649	65.04884	N/A	N/A	No	Exceeded!!	Awar is Closed
Incidental	2024-05-06	Yes	Caribou	4	Foraging	N/A	100	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	3	Foraging	E	300	66	West	No	-96.33501	64.80451	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	6	Walking	E	400	67	West	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	29	Foraging	E	2500	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	3	Foraging	N/A	610	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	6	Foraging	N/A	700	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Muskox	12	Foraging	N/A	50	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	8	Foraging	N/A	1200	94	West	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-05-06	Yes	Caribou	15	Walking	N	1200	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	3	Foraging	N/A	800	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	38	Foraging	N/A	1000	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	4	Lying Down	N/A	4	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	5	Foraging	N/A	300	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	8	Foraging	N/A	400	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	5	Foraging	N/A	600	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	4	Foraging	N/A	600	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	9	Foraging	N/A	400	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-07	Yes	Caribou	61	Walking	S	300	66	West	No	-96.33501	64.80451	N/A	N/A	No	Exceeded!!	Closed
Incidental	2024-05-07	Yes	Caribou	9	Walking	W	0	104	West,East	Yes	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-07	Yes	Caribou	5	Foraging	N/A	20	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-07	Yes	Caribou	14	Foraging	N/A	200	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-07	Yes	Caribou	11	Foraging	N/A	1000	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-07	Yes	Caribou	12	Foraging	NE	600	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	8	Walking	S	1000	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	13	Walking	S	100	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	18	Foraging	N/A	1000	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	34	Walking	SW	290	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	25	Foraging	N/A	400	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	19	Walking	S	430	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	12	Walking	S	800	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	12	Foraging	N/A	270	94	West	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	24	Foraging	N/A	700	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	12	Foraging	N/A	320	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	24	Foraging	N/A	200	104	Both	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	15	Foraging	N/A	100	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	3	Foraging	N/A	700	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	12	Foraging	N/A	180	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	12	Foraging	E	120	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	15	Foraging	N/A	260	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	4	Foraging	N/A	100	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	2	Foraging	W	300	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	7	Foraging	S	100	63	West	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	5	Foraging	N/A	90	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Arctic fox	1	Standing	N/A	100	56	East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Caribou	8	Foraging	N/A	500	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Caribou	7	Foraging	N/A	750	83	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Muskox	8	Foraging	N/A	100	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Caribou	20	Walking	N	250	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Caribou	7	Walking	N	250	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Caribou	18	Foraging	N/A	350	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	9	Foraging	N/A	50	107	East	No	-96.07193	65.02338	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Arctic hare	1	Resting	N/A	50	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	4	Walking	N	300	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	12	Foraging	N/A	350	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Muskox	4	Resting	N/A	50	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	5	Walking	N	2000	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	5	Walking	S	1500	29	West	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-10	Yes	Sandhill crane	2	Walking	W	100	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-10	Yes	Siksik	1	Walking	E	10	50	East	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-10	Yes	Caribou	13	Walking	S	500	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-10	Yes	Siksik	1	Standing	N/A	1	84	West	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-10	Yes	Caribou	10	Walking	E	750	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	7	Foraging	NE	150	107	East	No	-96.07193	65.02338	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	7	Foraging	N/A	200	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	2	Foraging	N/A	100	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	8	Walking	N	75	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	12	Walking	S	300	67	West	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	9	Walking	N	500	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Sandhill crane	2	Walking	N	100	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	10	Walking	S	500	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Sandhill crane	2	Standing	N/A	100	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Siksik	1	Standing	N	0	1	East	No	-95.9717	64.32525	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Siksik	2	Standing	N/A	0	5	East	No	-95.99998	64.35657	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Siksik	2	Standing	N/A	0	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Siksik	1	Running	W	0	31	East	No	-96.19574	64.55426	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Caribou	4	Trotting/running	S	300	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Caribou	8	Walking	N	400	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Muskox	6	Lying Down	N/A	150	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Muskox	3	Feeding	N/A	200	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-12	Yes	Caribou	1	Walking	E	0	104	Both	Yes	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Arctic hare	1	Feeding	N/A	10	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Caribou	7	Feeding	N/A	49	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Caribou	12	Feeding	S	10	100	Both	Yes	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Ptarmigan	5	Flying	W	0	98	Both	Yes	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Sandhill crane	2	Flying	W	0	23	Both	Yes	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Sandhill crane	2	Resting	N/A	10	14	West	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Sandhill crane	27	Feeding	N/A	10	8	West	No	-96.01547	64.38131	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Siksik	1	Walking	W	0	4	West	Yes	-95.99845	64.34605	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Arctic hare	1	Resting	N/A	1	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Siksik	1	Standing	N/A	5	29	West	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Sandhill crane	2	Flying	SE	200	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Siksik	1	Standing	W	0	56	West	Yes	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Caribou	2	Standing	W	400	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Caribou	17	Foraging	S	250	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Muskox	5	Foraging	N/A	30	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Caribou	7	Trotting/running	W	200	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Caribou	16	Foraging	E	500	100	East	Yes	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Caribou	45	Foraging	N	600	101	West	No	-96.14029	65.05669	N/A	N/A	No	Exceeded!!	Road Closed
Incidental	2024-05-12	Yes	Caribou	10	Foraging	N/A	30	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-12	Yes	Caribou	6	Walking	S	100	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	10	Walking	SW	0	104	East	Yes	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	8	Lying Down	N/A	200	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	3	Foraging	N/A	100	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	1	Resting	N/A	0	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	7	Lying Down	N/A	150	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	7	Foraging	N	300	99	East	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Muskox	3	Lying Down	N/A	100	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	5	Resting	N/A	20	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	3	Resting	N/A	50	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Arctic hare	2	Foraging	N/A	150	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	2	Foraging	W	100	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	1	Flying	N	40	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	5	Resting	E	15	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	6	Walking	N	300	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	1	Flying	N	50	32	West	Yes	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Siksik	1	Running	S	0	30	West	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Sandhill crane	3	Walking	NW	200	30	West	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	1	Resting	N/A	200	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	13	Running	S	600	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Sandhill crane	2	Standing	N/A	100	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Siksik	1	Walking	E	60	9	East	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Sandhill crane	3	Walking	W	200	9	West	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Ptarmigan	20	Walking	W	150	9	West	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	7	Walking	N	600	17	West	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Siksik	1	Dead	N/A	0	17	West	No	-96.07705	64.45326	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Siksik	1	Standing	N/A	0	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Sandhill crane	2	Resting	N/A	20	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Ptarmigan	2	Resting	N/A	20	32	West	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	18	Walking	S	800	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Falcon	2	Flying	N	0	85	West	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	27	Walking	S	600	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	9	Running	S	800	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	15	Foraging	N	40	99	East	Yes	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	7	Foraging	N	300	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	3	Feeding	N/A	70	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	3	Foraging	N/A	200	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Sandhill crane	1	Resting	N/A	400	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	5	Feeding	N/A	100	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Ptarmigan	3	Flying	W	0	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Arctic hare	3	Resting	W	20	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Sandhill crane	2	Resting	N/A	20	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Sandhill crane	2	Resting	N/A	20	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Ptarmigan	3	Flying	W	0	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	15	Walking	S	400	17	West	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	36	Walking	S	1000	34	West	No	-96.24047	64.56875	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-05-14	Yes	Caribou	5	Foraging	S	200	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	34	Foraging	S	300	59	West	No	-96.37059	64.74953	N/A	N/A	No	Exceeded!!	Road restriction
Road	2024-05-14	Yes	Caribou	30	Foraging	N	600	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	20	Resting	Not Recorded	300	101	Both	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Siksik	3	Running	W	100	17	East	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-05-14	Yes	Caribou	32	Walking	S	500	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Caribou	4	Feeding	N/A	50	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Caribou	5	Feeding	S	100	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Muskox	3	Resting	N/A	500	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Caribou	18	Foraging	S	200	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Caribou	5	Foraging	N/A	100	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-14	Yes	Caribou	1	Walking	N	500	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	12	Lying Down	N/A	500	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	14	Foraging	N/A	200	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	38	Lying Down	S	400	85	West	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Sandhill crane	1	Walking	N/A	100	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	25	Walking	W	300	76	West	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Ptarmigan	3	Resting	N/A	15	76	West	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	5	Walking	W	300	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Sandhill crane	2	Resting	N/A	10	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	77	Walking	SW	300	49	West	No	-96.37072	64.6688	N/A	N/A	No	Exceeded!!	Road Closed
Road	2024-05-15	Yes	Sandhill crane	9	Walking	NW	30	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Arctic fox	1	Walking	E	10	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Ptarmigan	1	Resting	N/A	50	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Sandhill crane	1	Resting	N/A	50	27	West	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Sandhill crane	2	Resting	N/A	100	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	12	Walking	S	100	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Ptarmigan	45	Foraging	N/A	15	6	West	No	-96.00083	64.36427	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-15	Yes	Caribou	12	Foraging	S	50	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-15	Yes	Caribou	15	Walking	S	500	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-15	Yes	Caribou	38	Walking	S	100	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Caribou	5	Walking	N	100	67	West	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	3	Standing	N/A	100	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	5	Standing	N/A	200	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	2	Walking	N	20	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	12	Standing	N/A	50	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	4	Walking	W	30	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	32	Walking	S	30	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	15	Resting	W	60	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	8	Resting	N/A	15	13	West	No	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	6	Resting	N/A	5	12	East	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	2	Standing	N/A	80	10	West	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Sandhill crane	7	Standing	N/A	90	8	West	No	-96.01547	64.38131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	35	Resting	N/A	50	4	West	No	-95.99845	64.34605	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	22	Walking	S	130	3	West	No	-95.98995	64.33765	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	15	Resting	N/A	20	3	West	No	-95.98995	64.33765	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	Yes	Ptarmigan	8	Resting	N/A	5	2	East	No	-95.97432	64.33258	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-16	Yes	Arctic fox	2	Resting	N/A	5	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-16	Yes	Rough-legged-Hawk	2	Resting	N/A	200	48	East	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-16	Yes	Sandhill crane	18	Standing	N/A	10	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-16	Yes	Caribou	5	Lying Down	N/A	30	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-16	Yes	Caribou	19	Lying Down	N/A	250	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Caribou	25	Foraging	N	75	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Muskox	6	Resting	N/A	50	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Sandhill crane	8	Walking	W	150	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Peregrine falcon	3	Flying	W	50	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Ptarmigan	34	Resting	N/A	1	75	West	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Sandhill crane	3	Flying	E	200	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Sandhill crane	11	Standing	N/A	30	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Ptarmigan	15	Resting	N/A	1	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Arctic fox	1	Alert	N/A	1	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Sandhill crane	5	Standing	W	110	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Peregrine falcon	1	Flying	W	30	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Snow goose	18	Resting	E	100	25	East	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Sandhill crane	3	Standing	N/A	60	11	West	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	5	Walking	N	100	105	West	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Muskox	4	Foraging	N/A	300	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	1	Walking	N	300	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Arctic hare	1	Running	S	50	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Sandhill crane	2	Walking	S	100	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Ptarmigan	3	Flying	S	25	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Ptarmigan	15	Standing	N/A	150	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Arctic fox	1	Walking	W	100	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Sandhill crane	6	Standing	N/A	100	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-18	Yes	Sandhill crane	4	Walking	W	100	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Sandhill crane	4	Standing	N/A	150	27	West	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Snow goose	25	Standing	N/A	50	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Seagull	45	Standing	N/A	50	3	West	No	-95.98995	64.33765	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Caribou	13	Walking	W	250	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Caribou	25	Foraging	N/A	50	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	10	Foraging	N/A	50	105	West	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Snow goose	15	Foraging	N/A	200	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	6	Walking	S	500	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	9	Foraging	N/A	200	85	West	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	1	Foraging	N/A	400	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	24	Walking	N	600	67	East	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Sandhill crane	4	Foraging	N/A	100	43	Both	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Snow goose	10	Foraging	N/A	100	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Greater white-fronted goose	4	Foraging	N/A	100	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Peregrine falcon	1	Flying	N	100	39	East	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-19	Yes	Caribou	8	Walking	S	400	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-19	Yes	Caribou	8	Foraging	N/A	100	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Standing	N/A	300	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	12	Standing	N/A	50	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	3	Resting	N/A	1	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Muskox	5	Resting	N/A	50	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	12	Flying	E	10	89	East	Yes	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Caribou	1	Foraging	W	100	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Snow goose	14	Resting	N/A	110	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	11	Resting	N/A	90	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	9	Walking	S	0	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	5	Walking	S	0	74	West	Yes	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Siksik	1	Walking	N	0	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	7	Foraging	E	10	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Siksik	1	Standing	N/A	1	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	8	Resting	N/A	0	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	1	Dead	N/A	0	52	East	No	-96.37745	64.70086	N/A	Project related	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	6	Resting	N/A	70	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Walking	N	30	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	6	Resting	N/A	0	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Foraging	NW	50	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Walking	SE	80	37	West	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Caribou	8	Walking	N	800	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Walking	SE	20	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Snow goose	29	Resting	N/A	40	31	West	No	-96.19574	64.55426	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Standing	N/A	20	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	3	Standing	N/A	30	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Standing	N/A	120	22	East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Siksik	1	Standing	N/A	0	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Walking	W	40	13	West	No	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Standing	N/A	15	10	West	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	4	Resting	N/A	0	10	West	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Ptarmigan	29	Walking	N	5	9	East	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Snow goose	2	Resting	N/A	80	2	East	No	-95.97432	64.33258	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Sandhill crane	2	Standing	N/A	120	2	East	No	-95.97432	64.33258	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Siksik	1	Standing	W	0	1	West	Yes	-95.9717	64.32525	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Siksik	1	Dead	N/A	0	30	West	No	-96.19577	64.55431	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Peregrine falcon	1	Resting	N/A	50	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Arctic fox	1	Resting	N/A	0	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Peregrine falcon	2	Resting	N/A	50	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Siksik	1	Dead	N/A	0	63	East	No	-96.34437	64.77932	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Caribou	11	Lying Down	N/A	600	84	West	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Caribou	4	Foraging	N/A	300	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Caribou	9	Walking	N	500	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Muskox	5	Foraging	N/A	1200	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-20	Yes	Caribou	9	Foraging	N/A	100	105	West	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Arctic fox	1	Walking	E	0	106	East	Yes	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	11	Lying Down	N/A	800	103	East	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	3	Lying Down	W	0	100	Both	Yes	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Muskox	2	Foraging	N/A	20	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Snow goose	14	Walking	W	100	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Arctic hare	1	Walking	E	10	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-21	Yes	Peregrine falcon	2	Resting	N/A	100	81	West	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Arctic hare	1	Resting	N/A	70	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Sandhill crane	2	Standing	N/A	100	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Siksik	1	Walking	S	80	71	East	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Peregrine falcon	1	Resting	N/A	100	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Ptarmigan	5	Resting	W	0	65	West	Yes	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Arctic fox	1	Walking	S	5	55	East	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	11	Walking	S	700	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Siksik	1	Resting	N/A	0	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Snow goose	2	Standing	N/A	50	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	4	Walking	S	800	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Snow goose	12	Flying	NW	50	21	East	Yes	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Ptarmigan	1	Dead	N/A	0	20	East	No	-96.09597	64.47868	N/A	Project related	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Rough-legged-Hawk	1	Flying	N	100	12	West	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Caribou	1	Foraging	N/A	1000	34	West	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Caribou	53	Walking	S	1000	43	West	No	-96.3007	64.63477	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-05-21	Yes	Caribou	3	Foraging	N/A	100	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	10	Resting	N/A	150	104	Both	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	3	Walking	S	200	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	24	Foraging	N/A	400	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	7	Resting	N/A	150	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	18	Resting	N/A	300	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	2	Walking	S	500	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	4	Walking	N	100	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	16	Walking	S	300	94	East	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Muskox	4	Foraging	N/A	300	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	5	Walking	NW	300	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	4	Walking	S	200	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	10	Walking	E	300	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	2	Foraging	N/A	200	83	East	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Sandhill crane	3	Foraging	N/A	100	71	East	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	4	Walking	N	400	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Arctic fox	1	Resting	N/A	10	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	36	Walking	NE	800	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	12	Walking	S	400	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-22	Yes	Caribou	7	Foraging	N/A	1000	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-23	Yes	Caribou	44	Walking	S	400	12	West	No	-96.02992	64.41394	N/A	N/A	No	Exceeded!!	Speed restriction 10-12 (road will be closed due to construction of bridge 1 around 13-14 h also)
Road	2024-05-23	Yes	Caribou	31	Walking	S	500	19	West	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-23	Yes	Caribou	52	Walking	S	500	37	West	No	-96.269	64.58416	N/A	N/A	No	Exceeded!!	Speed restriction 35-37 20 km/h
Road	2024-05-23	Yes	Caribou	9	Standing	N/A	400	41	West	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-23	Yes	Caribou	2	Foraging	N/A	50	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Sandhill crane	2	Foraging	N/A	30	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Muskox	2	Lying Down	N/A	1000	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	2	Foraging	N/A	1500	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	9	Foraging	N/A	80	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Muskox	7	Foraging	N/A	50	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	4	Walking	SE	2000	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Muskox	4	Foraging	N/A	1500	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Snow goose	50	Foraging	N/A	50	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	13	Foraging	N/A	20	85	West	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	4	Walking	N	2000	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	5	Lying Down	N/A	600	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	4	Foraging	N/A	1000	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Sandhill crane	2	Walking	NW	50	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	17	Walking	NE	1000	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Sandhill crane	2	Foraging	N/A	40	65	East	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	6	Foraging	N/A	50	64	East	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Siksik	1	Standing	N/A	0	53	East	Yes	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	4	Walking	W	30	40	East	Yes	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	43	Walking	S	100	38	West	No	-96.27582	64.59073	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-05-24	Yes	Sandhill crane	3	Foraging	N/A	30	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	5	Walking	E	2000	33	West	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	3	Foraging	N/A	200	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	9	Foraging	N/A	600	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	4	Foraging	N/A	100	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	3	Foraging	NE	400	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Muskox	4	Resting	W	100	89	Both	Yes	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	7	Resting	N/A	500	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Snow goose	67	Foraging	N/A	100	84	Both	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-25	Yes	Caribou	7	Resting	N/A	700	81	West	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Snow goose	84	Foraging	N/A	100	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Snow goose	102	Foraging	N/A	200	77	West	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	21	Walking	W	500	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	13	Walking	SW	400	67	West	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Snow goose	46	Flying	N	300	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-25	Yes	Caribou	7	Walking	S	500	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Gyrfalcon	1	Alert	N/A	300	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Peregrine falcon	1	Alert	N/A	200	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Arctic fox	1	Walking	N/A	0	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Peregrine falcon	1	Alert	N/A	300	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	15	Walking	S	400	50	West	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	6	Foraging	S	500	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Peregrine falcon	1	Alert	N/A	400	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Sandhill crane	2	Walking	W	0	62	West	Yes	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Snow goose	114	Foraging	N/A	50	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	1	Walking	W	0	79	West	Yes	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Peregrine falcon	1	Alert	N/A	300	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	6	Foraging	N/A	800	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Muskox	4	Foraging	N	200	89	West,East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	1	Walking	SW	600	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	8	Lying Down	N/A	400	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	7	Resting	N/A	300	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	2	Foraging	N/A	600	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Ptarmigan	1	Lying Down	N/A	500	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	3	Foraging	N/A	400	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Muskox	1	Lying Down	N/A	500	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	22	Walking	SE	1500	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	72	Foraging	N/A	60	87	Both	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	26	Foraging	N/A	700	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	59	Foraging	N/A	40	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	32	Foraging	N/A	40	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Sandhill crane	2	Foraging	N/A	40	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Gyrfalcon	2	Flying	N/A	60	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	5	Lying Down	N/A	600	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	7	Walking	E	500	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	26	Walking	N	600	66	West	No	-96.33501	64.80451	N/A	N/A	No	Exceeded!!	Road Closed
Road	2024-05-26	Yes	Caribou	8	Walking	SE	300	19	West	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-26	Yes	Caribou	18	Walking	SW	500	29	West	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-26	Yes	Caribou	1	Foraging	N/A	700	84	West	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Muskox	1	Foraging	N/A	400	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	1	Walking	S	500	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	6	Foraging	N/A	300	75	West	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	33	Foraging	SW	1500	60	West	No	-96.36363	64.75548	N/A	N/A	No	Exceeded!!	Road was restricted access
Road	2024-05-27	Yes	Caribou	5	Walking	NW	500	41	West	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-27	Yes	Peregrine falcon	1	Resting	N/A	70	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-27	Yes	Caribou	18	Walking	SW	1000	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	5	Foraging	N/A	300	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	2	Foraging	N/A	700	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	14	Walking	NW	800	94	West	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Peregrine falcon	1	Standing	N/A	40	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	3	Foraging	N/A	30	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Peregrine falcon	1	Flying	N/A	60	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	4	Walking	SW	400	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	17	Walking	E	800	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Caribou	4	Foraging	N/A	800	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Peregrine falcon	1	Standing	N/A	80	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-28	Yes	Muskox	1	Foraging	N/A	80	5	West	No	-95.99998	64.35657	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-28	Yes	Caribou	7	Walking	E	1500	15	East	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-28	Yes	Caribou	3	Walking	NE	1000	18	West	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-28	Yes	Caribou	12	Walking	SW	800	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-28	Yes	Muskox	1	Foraging	N/A	20	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	1	Foraging	N/A	3000	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	1	Standing	N/A	1500	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-29	Yes	Peregrine falcon	1	Standing	N/A	60	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	9	Foraging	N/A	60	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	5	Foraging	N/A	700	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Peregrine falcon	1	Standing	N/A	80	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	3	Walking	S	800	80	East	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	9	Foraging	N/A	900	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	2	Foraging	N/A	400	74	East	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	12	Walking	S	700	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	10	Walking	S	900	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	1	Walking	SW	300	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	1	Foraging	N/A	500	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	1	Foraging	N/A	800	51	East	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	4	Foraging	N/A	2000	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	3	Walking	SW	500	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Caribou	6	Foraging	Not Recorded	400	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-31	Yes	Caribou	15	Foraging	Not Recorded	400	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Muskox	1	Foraging	N/A	700	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	2	Foraging	N/A	500	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Muskox	3	Foraging	N/A	500	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	5	Lying Down	N/A	800	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Muskox	2	Foraging	N/A	100	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Muskox	1	Foraging	N/A	200	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	12	Foraging	N/A	400	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	3	Lying Down	N/A	500	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	4	Foraging	N/A	1000	81	West	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	2	Foraging	N/A	600	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	4	Foraging	N/A	400	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-02	Yes	Wolf	1	Walking	N	2000	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-02	Yes	Caribou	4	Foraging	N/A	300	77	West	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	2	Foraging	N/A	2000	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	1	Foraging	N/A	100	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	1	Foraging	N/A	150	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	1	Foraging	N/A	1000	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Muskox	4	Walking	W	40	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	6	Foraging	E	700	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Muskox	1	Foraging	N/A	300	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	6	Foraging	N/A	500	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	8	Lying Down	N/A	500	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	5	Walking	SW	500	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Caribou	6	Foraging	N/A	400	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-06	Yes	Snow goose	18	Flying	NE	500	82	East	Yes	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-06	Yes	Peregrine falcon	1	Resting	N/A	50	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-06	Yes	Peregrine falcon	1	Resting	N/A	30	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-06	Yes	Caribou	3	Trotting/running	S	100	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-06	Yes	Snow goose	36	Flying	NE	500	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-06	Yes	Caribou	9	Walking	SW	150	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-06	Yes	Ptarmigan	1	Dead	N/A	0	13	West	Yes	-96.03681	64.42344	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-06-06	Yes	Swan	1	Resting	N/A	200	17	West	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-07	Yes	Caribou	5	Foraging	Not Recorded	100	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	Speed restriction
Road	2024-06-09	Yes	Sandhill crane	2	Standing	N/A	300	8	West	No	-96.01547	64.38131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-09	Yes	Ptarmigan	3	Resting	N/A	10	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-09	Yes	Arctic fox	1	Resting	N/A	0	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-09	Yes	Muskox	1	Walking	W	30	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-09	Yes	Ptarmigan	1	Resting	N/A	0	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-09	Yes	Caribou	7	Lying Down	N/A	300	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-09	Yes	Muskox	1	Foraging	W	400	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Caribou	5	Foraging	E	300	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Arctic hare	2	Walking	E	0	92	Both	Yes	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Caribou	1	Foraging	N/A	500	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Ptarmigan	1	Running	E	0	58	East	Yes	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Arctic hare	1	Walking	S	100	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Caribou	6	Foraging	N/A	500	29	West	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Bald Eagle	1	Flying	E	150	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-11	Yes	Caribou	1	Walking	N	50	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Arctic hare	1	Foraging	W	20	85	West	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Caribou	3	Foraging	N	200	75	West	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Siksik	1	Standing	E	0	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Snow goose	2	Walking	W	20	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-06-12	Yes	Caribou	3	Walking	N	250	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Siksik	1	Standing	E	1	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Muskox	2	Walking	W	0	40	West	Yes	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-12	Yes	Canada goose	40	Flying	N	300	28	West	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Swan	4	Resting	N/A	400	18	West	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Swan	6	Swimming	E	400	28	East	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Caribou	8	Walking	N	300	66	West	No	-96.33501	64.80451	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Arctic fox	1	Running	W	0	76	Both	Yes	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Arctic fox	6	Walking	Not Recorded	5	74	East	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Ptarmigan	1	Dead	N/A	0	62	East	N/A	-96.3444	64.77373	N/A	Project related	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Ptarmigan	2	Resting	N/A	0	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Siksik	1	Standing	N/A	0	59	East	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Muskox	2	Lying Down	N/A	100	42	East	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-13	Yes	Sandhill crane	1	Walking	E	5	35	East	Yes	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Siksik	1	Dead	N/A	0	1	West	N/A	-95.9717	64.32525	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Muskox	2	Lying Down	N/A	60	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Caribou	6	Walking	S	300	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Peregrine falcon	2	Resting	N/A	50	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Arctic fox	1	Walking	W	0	98	East	Yes	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Swan	6	Flying	N	700	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-14	Yes	Caribou	4	Foraging	Not Recorded	150	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-14	Yes	Caribou	2	Foraging	Not Recorded	300	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-14	Yes	Muskox	1	Lying Down	N/A	150	40	West	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-14	Yes	Muskox	2	Resting	N/A	300	25	East	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-14	Yes	Arctic fox	5	Alert	E	0	44	East	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-14	Yes	Caribou	18	Foraging	N/A	500	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-14	Yes	Muskox	3	Foraging	N/A	100	99	Both	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Caribou	5	Foraging	N/A	400	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Canada goose	34	Flying	SW	0	83	East	Yes	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	33	Foraging	N/A	400	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Speed restriction put in place
Road	2024-06-15	Yes	Muskox	2	Resting	N/A	500	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	1	Foraging	N/A	300	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	2	Foraging	E	15	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Caribou	11	Foraging	N/A	400	62	West	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Caribou	1	Walking	W	100	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Muskox	1	Standing	N/A	20	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Caribou	6	Foraging	N/A	2	105	West	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Caribou	6	Foraging	N/A	20	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Muskox	1	Foraging	N/A	10	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Caribou	4	Foraging	N/A	300	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Caribou	3	Foraging	N/A	750	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Muskox	3	Foraging	N/A	500	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Caribou	4	Foraging	N/A	600	62	West	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Muskox	8	Foraging	N/A	600	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Peregrine falcon	1	Resting	Not Recorded	50	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Caribou	5	Foraging	N/A	350	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-16	Yes	Swan	10	Resting	N/A	300	17	West	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-16	Yes	Muskox	10	Foraging	N/A	500	35	West	N/A	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-16	Yes	Caribou	2	Walking	SW	250	52	West	N/A	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-16	Yes	Siksik	1	Walking	E	5	54	East	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-16	Yes	Muskox	3	Resting	N/A	150	65	West	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-16	Yes	Muskox	1	Foraging	N/A	5	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Caribou	2	N/A	N/A	20	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	Speed restriction
Road	2024-06-17	Yes	Caribou	2	Foraging	N/A	75	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Peregrine falcon	1	Alert	N/A	200	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Caribou	5	Foraging	N/A	500	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	1	Foraging	N/A	125	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	9	Resting	Not Recorded	100	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Arctic fox	1	Resting	Not Recorded	0	43	West	Yes	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	2	Foraging	N/A	100	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Caribou	14	Walking	NW	700	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	2	Walking	NW	500	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	1	Foraging	N/A	300	14	West	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-17	Yes	Caribou	4	Walking	S	600	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-17	Yes	Arctic fox	1	Walking	S	10	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-17	Yes	Muskox	6	Foraging	N	300	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	1	Foraging	W	20	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	6	Foraging	N	500	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	1	Foraging	N/A	300	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-06-18	Yes	Muskox	11	Foraging	N/A	600	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	1	Foraging	N/A	400	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	1	Foraging	N/A	500	41	West	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	1	Foraging	N/A	300	40	West	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	1	Foraging	N/A	50	15	East	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Caribou	1	Foraging	S	200	13	West	No	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Arctic fox	3	Walking	W	1	44	West	Yes	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Muskox	1	Foraging	N/A	20	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Caribou	1	Walking	N	100	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Caribou	2	Foraging	N/A	200	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Caribou	2	Foraging	N/A	150	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Arctic hare	1	Resting	N/A	15	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-18	Yes	Caribou	2	Walking	N	10	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	1	Foraging	N/A	50	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	1	Foraging	W	100	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	7	Foraging	N/A	300	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Caribou	8	Walking	N/A	0	63	Both	Yes	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	2	Foraging	N/A	200	42	East	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	2	Foraging	N/A	300	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	9	Foraging	N/A	700	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Caribou	6	Feeding	N/A	150	101	West	N/A	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Arctic fox	1	Running	S	0	99	Both	Yes	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Caribou	2	Walking	E	200	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Siksik	1	Walking	S	0	79	Both	Yes	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Muskox	1	Standing	N/A	50	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Arctic fox	1	Walking	N/A	0	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Caribou	1	Standing	N/A	350	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Swan	3	Not recorded	N/A	40	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Muskox	1	Feeding	N/A	15	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Arctic fox	1	Walking	E	5	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-20	Yes	Muskox	1	Walking	E	75	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-20	Yes	Muskox	1	Foraging	W	200	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-20	Yes	Caribou	10	Foraging	N/A	500	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Muskox	1	Foraging	N/A	100	105	West	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Muskox	1	Lying Down	N/A	300	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Caribou	2	Lying Down	N/A	500	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Caribou	5	Walking	SE	100	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Caribou	2	Foraging	N/A	500	81	West	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Caribou	4	Foraging	N/A	500	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Bald Eagle	1	Alert	N/A	200	63	West	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Muskox	1	Foraging	N/A	300	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Arctic fox	1	Lying Down	N/A	0	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Muskox	1	Lying Down	N/A	200	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-21	Yes	Muskox	1	Foraging	N/A	300	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-21	Yes	Muskox	1	Foraging	N/A	400	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-21	Yes	Muskox	3	Foraging	N/A	15	57	West,East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-21	Yes	Caribou	3	Lying Down	N/A	400	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-21	Yes	Caribou	1	Foraging	N/A	500	82	East	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-21	Yes	Caribou	2	Foraging	N/A	300	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	1	Foraging	N/A	200	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	1	Walking	E	100	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Caribou	2	Foraging	N/A	150	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Caribou	4	Foraging	N/A	300	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	1	Foraging	N/A	200	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	1	Lying Down	N/A	100	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	2	Lying Down	N/A	100	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Arctic fox	1	Walking	N/A	5	44	West	Yes	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Bald Eagle	1	Standing	N/A	300	18	East	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Muskox	1	Walking	NE	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Caribou	1	Walking	E	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Caribou	2	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Caribou	4	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Caribou	10	Foraging	N/A	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Muskox	1	Foraging	N/A	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Muskox	1	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Muskox	7	Feeding	N/A	9	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Caribou	2	Lying Down	N/A	1000	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Caribou	1	Standing	N/A	320	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Caribou	7	Walking	S	300	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Caribou	8	Lying Down	N/A	400	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Caribou	12	Walking	S	1000	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-06-23	Yes	Muskox	2	Feeding	N/A	3	65	East	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-23	Yes	Caribou	2	Walking	S	300	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	8	Resting	N/A	75	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	1	Foraging	N/A	100	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	7	Feeding	N/A	200	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	3	Feeding	N/A	800	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	8	Feeding	N/A	120	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	2	Walking	N	100	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	2	Resting	N/A	50	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	1	Walking	N	1200	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Arctic fox	1	Walking	W	0	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	1	Walking	E	30	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	1	Feeding	N/A	20	9	East	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-25	Yes	Caribou	8	Feeding	N/A	780	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-25	Yes	Muskox	1	Feeding	N	5	56	East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-25	Yes	Muskox	2	Lying Down	N/A	350	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-25	Yes	Muskox	25	Foraging	N/A	100	103	West,East	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Restriction
Road	2024-06-26	Yes	Caribou	1	Foraging	N	300	84	West	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-26	Yes	Caribou	5	Walking	S	1000	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-26	Yes	Caribou	4	Foraging	S	200	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-26	Yes	Muskox	1	Foraging	N/A	1000	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-26	Yes	Muskox	1	Foraging	N/A	400	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-26	Yes	Arctic fox	1	Alert	N/A	0	43	West	N/A	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Caribou	4	Trotting/running	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Muskox	1	Walking	E	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Caribou	1	Trotting/running	N	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Muskox	1	Lying Down	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Muskox	1	Lying Down	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Muskox	1	Lying Down	N/A	N/A	54	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Muskox	2	Lying Down	N/A	N/A	58	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	Speed restriction
Incidental	2024-06-26	Yes	Muskox	2	Foraging	N/A	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Muskox	25	Foraging	N/A	800	85	East	N/A	N/A	N/A	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-06-26	Yes	Caribou	1	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-27	Yes	Muskox	10	Foraging	N/A	1000	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	1	Foraging	N/A	140	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	1	Lying Down	N/A	100	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	2	Foraging	N/A	200	61	West	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-28	Yes	Caribou	2	Foraging	N/A	110	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-28	Yes	Muskox	1	Foraging	N/A	120	57	West	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-28	Yes	Muskox	2	Foraging	N/A	890	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-28	Yes	Muskox	2	Foraging	N/A	1300	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-28	Yes	Muskox	2	Foraging	N/A	1	22	East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-29	Yes	Muskox	1	Foraging	N/A	5	94	East	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-29	Yes	Caribou	3	Foraging	N/A	400	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-29	Yes	Muskox	1	Foraging	N/A	50	55	East	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-29	Yes	Muskox	4	Walking	S	1000	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-29	Yes	Muskox	9	Walking	S	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-29	Yes	Muskox	7	Foraging	N/A	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-29	Yes	Muskox	1	Foraging	N/A	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-29	Yes	Muskox	1	Foraging	N/A	N/A	N/A	East	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-29	Yes	Muskox	18	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-06-29	Yes	Muskox	1	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-29	Yes	Caribou	1	Foraging	N/A	N/A	N/A	West	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-30	Yes	Muskox	2	Foraging	N/A	20	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-30	Yes	Caribou	6	Walking	SW	400	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-30	Yes	Muskox	2	Foraging	N/A	1	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-02	Yes	Muskox	19	Lying Down	N/A	400	104	East	No	-96.09721	65.04458	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-07-02	Yes	Muskox	1	Foraging	N/A	50	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-02	Yes	Muskox	3	Foraging	N/A	400	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-02	Yes	Muskox	1	Lying Down	N/A	100	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-02	Yes	Muskox	1	Foraging	N/A	50	45	East	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-02	Yes	Muskox	1	Foraging	N/A	5	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-02	Yes	Muskox	1	Foraging	N/A	5	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-02	Yes	Muskox	2	Foraging	N/A	1500	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-02	Yes	Muskox	2	Foraging	N/A	10	102	West	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-02	Yes	Caribou	2	Lying Down	N/A	800	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-03	Yes	Muskox	9	Lying Down	N/A	200	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-03	Yes	Muskox	1	Feeding	N/A	800	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-03	Yes	Muskox	1	Feeding	N/A	200	44	East	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-03	Yes	Muskox	1	Lying Down	N/A	800	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-03	Yes	Muskox	4	Feeding	N/A	0	12	Both	Yes	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-07-03	Yes	Muskox	19	Feeding	E	0	104	East	No	-96.09721	65.04458	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-07-03	Yes	Arctic fox	4	Feeding	N/A	0	32	West	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-03	Yes	Muskox	1	Feeding	N/A	700	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Muskox	1	Feeding	N/A	0	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Muskox	2	Lying Down	N/A	10	96	Both	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Arctic hare	1	Running	E	0	73	Both	Yes	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Muskox	1	Feeding	N/A	20	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Muskox	1	Standing	N/A	75	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Caribou	2	Walking	N	40	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Muskox	1	Feeding	N/A	200	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-05	Yes	Muskox	1	Feeding	N/A	20	16	West	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-08	Yes	Arctic fox	1	Dead	N/A	N/A	N/A	N/A	N/A	-96.16146	64.52353	N/A	Project related	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	4	Feeding	N/A	500	9	East	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	3	Walking	Not Recorded	20	22	East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	2	Standing	N	800	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	2	Feeding	N	20	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	14	Walking	SW	500	90	West	No	-96.22208	64.97501	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-07-08	Yes	Arctic hare	1	Standing	N/A	0	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	2	Feeding	N/A	0	100	East	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	1	Lying Down	N/A	0	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	8	Walking	S	700	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-08	Yes	Muskox	1	Walking	N	20	106	West	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Arctic fox	1	Feeding	S	0	102	Both	Yes	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Muskox	2	Lying Down	N/A	20	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Arctic hare	1	Running	S	10	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Muskox	1	Standing	N/A	750	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Arctic fox	4	Walking	S	0	67	West	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Arctic fox	2	Walking	N	0	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Muskox	1	Walking	NW	30	40	West	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-09	Yes	Arctic fox	1	Walking	SW	0	30	West	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-10	Yes	Muskox	1	Foraging	N/A	1	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	1	Foraging	N/A	15	106	East	No	-96.08289	65.02713	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	23	Lying Down	N/A	2500	103	West	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Beyond 1.5 km away
Road	2024-07-11	Yes	Muskox	1	Foraging	N/A	1	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Peregrine falcon	1	Flying	E	20	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Arctic hare	1	Running	W	5	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Caribou	2	Walking	S	850	78	East	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	1	Foraging	N/A	50	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	1	Foraging	N/A	600	42	East	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Arctic fox	2	Resting	N/A	5	33	West	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	3	Foraging	N/A	500	25	East	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	9	Foraging	N/A	1200	18	East	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Muskox	2	Resting	N/A	300	107	West	No	-96.07193	65.02338	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Muskox	1	Resting	N/A	200	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Caribou	5	Foraging	N/A	500	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Siksik	1	Alert	N/A	0	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Siksik	1	Alert	N/A	0	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Siksik	1	Running	E	0	56	Both	Yes	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Muskox	1	Resting	N/A	300	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Muskox	1	Foraging	N/A	300	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Siksik	2	Alert	N/A	0	26	West	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Muskox	1	Foraging	N/A	300	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Bald Eagle	1	Alert	N/A	200	17	East	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Muskox	10	Foraging	N/A	600	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Muskox	1	Foraging	N/A	300	99	East	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Arctic hare	1	Running	W	0	84	Both	Yes	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Siksik	1	Running	W	0	80	Both	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Siksik	1	Standing	N/A	0	63	West	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Muskox	1	Foraging	N/A	400	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Muskox	3	Foraging	N/A	400	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Arctic fox	1	Walking	W	0	46	Both	Yes	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Muskox	1	Foraging	N/A	400	33	West	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Sandhill crane	4	Walking	N/A	0	28	Both	Yes	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Muskox	1	Foraging	N/A	300	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-16	Yes	Siksik	1	Alert	N/A	0	7	East	No	-96.00916	64.37262	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-16	Yes	Muskox	7	Lying Down	N/A	500	49	West	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-16	Yes	Muskox	1	Foraging	N/A	200	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-16	Yes	Muskox	1	Foraging	N/A	100	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-17	Yes	Siksik	1	Standing	N/A	0	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-17	Yes	Muskox	1	Feeding	N/A	100	104	East	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-07-17	Yes	Arctic fox	1	Walking	S	0	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-17	Yes	Muskox	1	Standing	N/A	400	11	West	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-19	Yes	Muskox	11	Foraging	N/A	300	104	West	No	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-19	Yes	Siksik	1	Alert	N/A	0	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-19	Yes	Siksik	1	Running	E	0	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-19	Yes	Siksik	1	Alert	N/A	0	31	West	No	-96.19574	64.55426	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-19	Yes	Siksik	1	Alert	N/A	0	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-19	Yes	Muskox	1	Walking	W	100	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Muskox	11	Lying Down	N/A	30	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Muskox	8	Walking	S	100	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Caribou	1	Walking	E	100	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Muskox	1	Foraging	N/A	400	55	East	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Arctic fox	2	Walking	N	50	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Wolf	1	Walking	NE	50	51	East	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Arctic fox	1	Walking	N/A	1	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Snowy owl	1	Resting	N/A	50	29	West	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Muskox	1	Foraging	N/A	70	28	West	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Muskox	1	Foraging	N/A	40	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Muskox	1	Lying Down	N/A	70	8	East	No	-96.01547	64.38131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Arctic fox	2	Standing	N/A	0	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Sandhill crane	2	Standing	N/A	5	53	East	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Siksik	1	Standing	N/A	0	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Arctic fox	1	Running	E	0	47	East	Yes	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Arctic fox	3	Resting	N/A	0	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Arctic fox	1	Running	W	0	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Sandhill crane	2	Feeding	E	15	13	East	No	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-30	Yes	Muskox	12	Foraging	E	5	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-31	Yes	Muskox	1	Foraging	N/A	1000	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Muskox	1	Feeding	N/A	15	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Canada goose	86	Resting	E	30	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Siksik	1	Standing	N/A	10	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Peregrine falcon	1	Resting	N/A	30	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Sandhill crane	2	Flying	E	50	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Peregrine falcon	2	Flying	W	30	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Arctic fox	3	Alert	N/A	0	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Siksik	1	Dead	N/A	0	64	East	No	-96.34001	64.78668	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Peregrine falcon	2	Alert	N/A	30	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Arctic fox	1	Resting	N/A	0	43	West	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Ptarmigan	9	Walking	N	1	34	East	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Peregrine falcon	2	Flying	S	30	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-04	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-08-04	Yes	Arctic fox	1	Dead	N/A	0	102	East	No	-96.12783	65.0517	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-08-04	Yes	Caribou	1	Foraging	S	600	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-04	Yes	Muskox	1	Walking	NW	10	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Arctic hare	1	Dead	N/A	0	87	West	No	-96.24102	64.9542	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Ptarmigan	2	Walking	W	0	86	West	Yes	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Siksik	1	Dead	N/A	0	63	West	No	-96.34437	64.77932	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Arctic hare	1	Dead	N/A	0	35	West	No	-96.24426	64.57386	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Arctic fox	1	Walking	NW	0	20	West	Yes	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Arctic fox	1	Running	S	15	3	East	No	-95.98995	64.33765	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-06	Yes	Muskox	1	Foraging	SE	30	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-06	Yes	Ptarmigan	11	Resting	W	2	16	West	Yes	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Ptarmigan	6	Resting	N/A	15	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Sandhill crane	2	Feeding	N/A	50	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Siksik	1	Dead	N/A	0	64	East	No	-96.34001	64.78668	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Caribou	1	Walking	NE	0	49	East	Yes	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Arctic fox	1	Running	NE	0	0	Both	Yes	-96.36312	64.6618	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Peregrine falcon	1	Flying	N	150	44	West	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Caribou	1	Running	E	0	43	Both	Yes	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Ptarmigan	5	Resting	N/A	30	35	East	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Bald Eagle	1	Flying	N	1000	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Muskox	53	Foraging	NW	1000	15	East	No	-96.0525	64.43981	N/A	N/A	No	Exceeded!!	Speed restriction from km 15 to 16 at 30 km/h
Road	2024-08-08	Yes	Bald Eagle	1	Flying	SW	0	0	Both	Yes	-95.97639	64.31665	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-09	Yes	Arctic fox	1	Dead	N/A	0	98	East	No	-96.15765	65.03248	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-10	Yes	Caribou	1	Walking	E	0	87	Both	Yes	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-13	Yes	Arctic fox	2	Walking	E	0	93	West	Yes	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-13	Yes	Siksik	1	Dead	N/A	0	85	West	No	-96.26143	64.93886	N/A	Project related	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-08-13	Yes	Muskox	7	Foraging	N/A	600	80	East	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-13	Yes	Muskox	12	Walking	S	800	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Arctic hare	1	Resting	N/A	0	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Bald Eagle	1	Alert	N/A	300	63	West	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Arctic fox	1	Resting	N/A	0	47	West	Yes	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Arctic fox	2	Resting	W	0	43	East	Yes	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Arctic fox	1	Walking	W	0	22	West	Yes	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	150	Foraging	Not Recorded	1000	103	West	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-08-18	Yes	Muskox	1	Foraging	N/A	200	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-18	Yes	Muskox	11	Foraging	N/A	150	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-20	Yes	Arctic hare	1	Dead	N/A	0	89	East	No	-96.21956	64.96744	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-20	Yes	Arctic fox	1	Lying Down	N/A	0	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-20	Yes	Arctic fox	1	Resting	N/A	N/A	22	West	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-20	Yes	Muskox	10	Feeding	Not Recorded	1000	5	East	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Caribou	1	Walking	SE	30	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Sandhill crane	5	Feeding	N/A	10	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Muskox	1	Walking	S	200	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Sandhill crane	4	Feeding	N/A	100	63	West	N/A	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Wolf	5	Alert	N	1	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Muskox	9	Walking	NE	250	37	East	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-23	Yes	Siksik	1	Dead	N/A	N/A	104	East	N/A	-96.16146	64.52353	N/A	Project related	No	Not Exceeded	N/A
Road	2024-08-23	Yes	Arctic hare	1	Trotting/ running	NW	20	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-23	Yes	Muskox	11	Walking	NE	200	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-23	Yes	Muskox	10	Foraging	S	100	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-23	Yes	Muskox	5	Lying Down	N/A	80	29	East	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-23	Yes	Muskox	9	Walking	W	500	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-23	Yes	Caribou	1	Foraging	N/A	50	89	East	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-08-26	Yes	Snow goose	51	Resting	Not Recorded	200	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-26	Yes	Muskox	1	Feeding	Not Recorded	100	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-26	Yes	Wolf	1	Alert	E	0	17	East	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-30	Yes	Muskox	6	Feeding	Not Recorded	500	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-30	Yes	Muskox	5	Feeding	S	800	26	East	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-30	Yes	Caribou	6	Alert	N	200	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-30	Yes	Caribou	27	Alert	N	400	21	East	No	-96.1045	64.48693	N/A	N/A	No	Exceeded!!	Speed restriction applied Road closure soon
Road	2024-08-30	Yes	Caribou	146	Trotting/ running	N	200	20	East	No	-96.09597	64.47868	N/A	N/A	No	Exceeded!!	Road closure in effect
Incidental	2024-08-30	Yes	Muskox	1	Feeding	Not Recorded	500	19	East	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-30	Yes	Caribou	21	Foraging	N	350	22	East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-30	Yes	Caribou	18	Walking	E	1000	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-30	Yes	Muskox	8	Feeding	Not Recorded	100	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Muskox	1	Trotting/running	S	200	78	East	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Muskox	21	Foraging	N	3000	62	East	No	-96.3444	64.77373	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-08-31	Yes	Caribou	51	Walking	N	2000	38	East	No	-96.27582	64.59073	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-08-31	Yes	Caribou	51	Alert	Not Recorded	100	31	East	No	-96.19574	64.55426	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-08-31	Yes	Caribou	49	Alert	Not Recorded	500	24	East	No	-96.13651	64.50789	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-08-31	Yes	Caribou	81	Walking	N	2000	23	East	No	-96.12442	64.50056	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-08-31	Yes	Caribou	7	Walking	W	1500	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Caribou	6	Standing	E	500	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Caribou	35	Foraging	N	1000	31	East	No	-96.19574	64.55426	N/A	N/A	No	Exceeded!!	Road is restricted access
Incidental	2024-08-31	Yes	Caribou	3	Feeding	E	1000	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Muskox	24	Resting	Not Recorded	800	48	East	No	-96.36878	64.66417	N/A	N/A	No	Exceeded!!	Road is retricted access
Road	2024-09-01	Yes	Caribou	10	Feeding	Not Recorded	2000	56	East	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-01	Yes	Caribou	10	Feeding	Not Recorded	100	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-01	Yes	Caribou	5	Alert	N	300	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-01	Yes	Caribou	37	Feeding	Not Recorded	2500	44	East	No	-96.30352	64.64171	N/A	N/A	No	Exceeded!!	Speed restrictions in effect on AWAR Awar is restricted access
Road	2024-09-01	Yes	Muskox	11	Feeding	Not Recorded	3000	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-01	Yes	Caribou	4	Walking	N	1000	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	19	Walking	N	500	22	East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	100	Walking	SW	5000	22	East	No	-96.11256	64.4935	N/A	N/A	No	Exceeded!!	Awar is restricted access only
Incidental	2024-09-01	Yes	Caribou	5	Walking	S	750	28	West	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	20	Walking	NW	2000	36	West	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	10	Trotting/running	W	500	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	24	Walking	S	1000	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	26	Walking	S	1000	39	West	No	-96.27514	64.59586	N/A	N/A	No	Exceeded!!	Restricted access
Road	2024-09-02	Yes	Caribou	12	Walking	N	250	66	East	No	-96.33501	64.80451	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-02	Yes	Caribou	12	Walking	NW	1000	26	East	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-02	Yes	Caribou	3	Walking	W	0	23	Both	Yes	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-02	Yes	Caribou	62	Walking	NW	5000	58	East	No	-96.35794	64.74165	N/A	N/A	No	Exceeded!!	Road closure in progress
Incidental	2024-09-02	Yes	Caribou	56	Walking	NW	750	59	East	No	-96.37059	64.74953	N/A	N/A	No	Exceeded!!	Road closure in effect Speed restriction applied for this area to any remaining road users
Incidental	2024-09-02	Yes	Caribou	18	Resting	Not Recorded	500	63	East	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-02	Yes	Caribou	35	Walking	N	300	68	East	No	-96.32681	64.82032	N/A	N/A	No	Exceeded!!	Awar is closed Speed restriction applied for remaining road users

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-09-02	Yes	Muskox	16	Feeding	Not Recorded	500	83	West	No	-96.30111	64.935	N/A	N/A	No	Exceeded!!	Awar is closed
Incidental	2024-09-02	Yes	Caribou	160	Walking	NW	200	61	East	No	-96.35467	64.76327	N/A	N/A	No	Exceeded!!	Awar road closure Speed restriction applied in this area for the remaining road users
Road	2024-09-03	Yes	Muskox	17	Feeding	W	25	84	West	No	-96.28276	64.9366	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-09-03	Yes	Caribou	23	Feeding	N	1000	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-03	Yes	Caribou	121	Feeding	Not Recorded	100	73	East	No	-96.32423	64.86213	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Muskox	29	Resting	Not Recorded	500	70	East	No	-96.31652	64.83649	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	21	Feeding	Not Recorded	1000	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-03	Yes	Caribou	34	Foraging	S	300	66	East	No	-96.33501	64.80451	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	15	Walking	W	2000	65	West	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-03	Yes	Caribou	127	Alert	S	350	63	East	No	-96.34437	64.77932	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	143	Feeding	W	5	60	East	No	-96.36363	64.75548	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	150	Walking	S	200	57	East	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	65	Walking	S	200	55	East	No	-96.34597	64.71855	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	13	Resting	Not Recorded	750	50	East	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-03	Yes	Caribou	5	Standing	Not Recorded	1000	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-03	Yes	Caribou	27	Walking	N	250	29	East	No	-96.18125	64.54733	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-09-03	Yes	Caribou	8	Walking	S	500	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-03	Yes	Caribou	12	Walking	S	300	22	East	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-03	Yes	Caribou	105	Walking	S	5	55	East	No	-96.34597	64.71855	N/A	N/A	No	Exceeded!!	AWAR is closed
Incidental	2024-09-03	Yes	Caribou	8	Alert	N	1000	72	West	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-04	Yes	Arctic hare	2	Trotting/running	E	0	92	East	Yes	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-04	Yes	Caribou	3	Feeding	N/A	250	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-04	Yes	Caribou	50	Foraging	N/A	100	82	East	No	-96.31204	64.9306	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	34	Foraging	N/A	1000	81	East	No	-96.30208	64.92518	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	36	Foraging	N/A	100	80	East	No	-96.30624	64.91707	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	52	Foraging	N/A	75	76	Both	No	-96.34565	64.88789	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	50	Foraging	N/A	150	73	East	No	-96.32423	64.86213	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	19	Lying Down	N/A	71	50	East	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-04	Yes	Caribou	102	Foraging	N/A	300	68	Both	No	-96.32681	64.82032	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	26	Foraging	W	250	65	Both	No	-96.34062	64.7948	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-04	Yes	Caribou	65	Foraging	N/A	150	62	East	No	-96.3444	64.77373	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-05	Yes	Caribou	10	Standing	N/A	350	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	10	Foraging	N/A	400	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	5	Foraging	N/A	300	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	9	Foraging	N/A	250	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	15	Resting	N/A	500	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	127	Foraging	S	250	81	Both	No	-96.30208	64.92518	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-05	Yes	Caribou	112	Foraging	S	250	81	Both	No	-96.30208	64.92518	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-05	Yes	Caribou	27	Foraging	N/A	250	79	East	No	-96.31492	64.90953	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-05	Yes	Caribou	26	Foraging	N/A	250	77	Both	No	-96.33908	64.89511	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-05	Yes	Caribou	11	Foraging	N/A	150	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	18	Walking	W	500	73	West	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	22	Walking	N	300	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	5	Foraging	N/A	250	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	9	Foraging	N/A	750	63	East	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	25	Foraging	N/A	500	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	22	Foraging	N	50	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	12	Foraging	N/A	500	83	East	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	8	Foraging	N/A	500	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	21	Foraging	N	500	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	35	Foraging	N/A	250	78	West	No	-96.32437	64.90319	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-06	Yes	Caribou	7	Feeding	N/A	100	78	East	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	31	Foraging	N	500	76	West	No	-96.34565	64.88789	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-09-06	Yes	Caribou	19	Foraging	N/A	250	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	5	Trotting/ running	SW	300	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Peregrine falcon	2	Resting	N/A	N/A	70	N/A	N/A	-96.31652	64.83679	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	11	Foraging	N/A	50	69	Both	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-07	Yes	Caribou	2	Feeding	N/A	250	85	West	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-07	Yes	Caribou	3	Walking	N	400	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-07	Yes	Caribou	9	Walking	S	300	76	West	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-07	Yes	Caribou	18	Walking	N	500	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-07	Yes	Caribou	1	Walking	N	800	42	West	No	-96.2949	64.62757	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-08	Yes	Caribou	8	Foraging	N/A	2000	81	West	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-08	Yes	Caribou	9	Foraging	N/A	1000	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-08	Yes	Caribou	1	Foraging	N/A	250	75	West	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-08	Yes	Muskox	1	Lying Down	N/A	100	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-09-08	Yes	Caribou	3	Foraging	SW	350	66	West	No	-96.33501	64.80451	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Ptarmigan	3	Walking	N/A	5	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Snow goose	11	Flying	N	10	101	East	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Snow goose	48	Foraging	N/A	50	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Caribou	4	Walking	S	300	74	East	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Snow goose	100	Standing	N/A	0	49	Both	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Siksik	1	Standing	N/A	0	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Snow goose	200	Resting	N/A	300	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Caribou	7	Foraging	N/A	350	37	East	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-09	Yes	Canada goose	15	Flying	E	25	21	Both	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-09	Yes	Caribou	4	Walking	N	150	63	West	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	45	Standing	N/A	50	100	West	No	-96.14649	65.04884	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	74	Standing	N/A	0	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	2	Walking	N	150	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	300	Standing	N/A	50	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	3	Feeding	N/A	75	83	East	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	150	Standing	N/A	10	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Ptarmigan	7	Standing	N/A	0	55	West	No	-96.34597	64.71855	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Canada goose	14	Flying	W	0	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	75	Standing	N/A	100	38	West	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	32	Standing	N/A	30	24	East	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Arctic fox	2	Walking	E	5	20	Both	Yes	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Snow goose	64	Standing	N/A	100	14	East	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	53	Foraging	W	400	42	Both	Yes	-96.2949	64.62757	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	22	Foraging	W	300	47	West	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	46	Foraging	W	500	49	Both	Yes	-96.37072	64.6688	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	71	Foraging	W	400	50	East	No	-96.3731	64.67942	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	22	Foraging	W	200	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	50	Foraging	NW	200	58	East	No	-96.35794	64.74165	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	73	Foraging	W	20	60	East	Yes	-96.36363	64.75548	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	3	Foraging	W	300	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	56	Foraging	W	400	35	East	No	-96.24426	64.57386	N/A	N/A	No	Exceeded!!	Road restriction
Road	2024-09-11	Yes	Caribou	84	Foraging	S	500	37	East	No	-96.269	64.58416	N/A	N/A	No	Exceeded!!	Road restriction
Road	2024-09-11	Yes	Caribou	15	Foraging	S	300	40	East	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	87	Foraging	W	300	60	Both	Yes	-96.36363	64.75548	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	34	Foraging	W	500	67	East	No	-96.3262	64.81233	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	9	Foraging	W	300	74	East	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	55	Foraging	S	150	77	Both	Yes	-96.33908	64.89511	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-11	Yes	Caribou	4	Foraging	W	200	80	East	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-11	Yes	Caribou	91	Foraging	NW	400	44	East	No	-96.30352	64.64171	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-09-11	Yes	Caribou	8	Feeding	W	75	38	East	No	-96.27582	64.59073	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-11	Yes	Caribou	62	Walking	E	100	42	East	No	-96.2949	64.62757	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-09-11	Yes	Caribou	7	Walking	SW	75	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-11	Yes	Caribou	17	Walking	E	150	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-11	Yes	Caribou	47	Walking	N	200	72	East	No	-96.32384	64.85386	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-09-11	Yes	Caribou	9	Walking	N	250	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-11	Yes	Caribou	7	Feeding	N/A	25	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Snow goose	60	Standing	N/A	5	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Arctic hare	1	Walking	S	5	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	6	Feeding	N/A	50	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	2	Walking	S	175	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	3	Walking	N	200	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Snow goose	130	Standing	N/A	400	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	10	Feeding	E	30	86	Both	Yes	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	36	Feeding	E	150	83	Both	No	-96.30111	64.935	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-12	Yes	Caribou	42	Feeding	W	50	77	Both	No	-96.33908	64.89511	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-12	Yes	Caribou	5	Walking	N	100	72	East	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	36	Lying Down	N/A	100	68	East	No	-96.32681	64.82032	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-09-12	Yes	Caribou	8	Running	N	300	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-12	Yes	Caribou	19	Walking	W	0	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-12	Yes	Wolverine	1	Running	N	200	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-12	Yes	Muskox	1	Resting	N/A	10	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-13	Yes	Muskox	1	Feeding	N/A	15	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-13	Yes	Caribou	4	Walking	W	300	71	West	No	-96.3197	64.84471	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-13	Yes	Muskox	1	Walking	E	100	40	East	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-13	Yes	Caribou	3	Feeding	N/A	200	44	East	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-14	Yes	Snow goose	150	Foraging	N/A	100	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-14	Yes	Caribou	8	Walking	NW	500	77	East	N/A	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-14	Yes	Caribou	4	Running	SE	600	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-14	Yes	Caribou	13	Walking	NE	600	76	East	N/A	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-14	Yes	Caribou	3	Trotting/running	SE	550	25	West	No	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-09-14	Yes	Muskox	9	Lying Down	N/A	500	12	West	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-14	Yes	Caribou	3	Trotting/running	S	500	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-14	Yes	Caribou	1	Trotting/running	N	75	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-14	Yes	Caribou	3	Trotting/running	NW	400	3	East	No	-95.98995	64.33765	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-14	Yes	Caribou	6	Feeding	N/A	500	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-15	Yes	Muskox	1	Feeding	N/A	20	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-15	Yes	Snow goose	175	Resting	N/A	10	89	Both	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-15	Yes	Snow goose	40	Resting	N/A	30	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-15	Yes	Snow goose	200	Standing	N/A	30	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-15	Yes	Caribou	2	Walking	SW	400	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-15	Yes	Caribou	2	Resting	E	250	47	East	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Caribou	5	Foraging	N/A	150	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Siksik	1	Walking	E	1	76	East	Yes	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Snow goose	15	Resting	E	150	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Snow goose	20	Resting	W	10	51	West	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Siksik	1	Running	W	1	48	West	Yes	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Siksik	1	Running	S	0	46	East	Yes	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Siksik	1	Running	S	0	43	West	Yes	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Muskox	1	Standing	W	400	18	West	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Snow goose	100	Flying	W	10	10	West	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-16	Yes	Snow goose	15	Flying	S	10	6	East	No	-96.00083	64.36427	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-17	Yes	Muskox	12	Lying Down	N/A	1000	105	West	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-17	Yes	Caribou	2	Feeding	W	150	94	East	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	Speed restriction
Road	2024-09-17	Yes	Caribou	1	Foraging	SE	200	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-17	Yes	Caribou	1	Walking	W	1000	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-17	Yes	Caribou	3	Trotting/running	NW	50	59	West	Yes	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-18	Yes	Ptarmigan	1	Dead	N/A	0	65	West	Yes	-96.34062	64.7948	N/A	Project related	No	Not Exceeded	N/A
Road	2024-09-18	Yes	Caribou	1	Walking	SW	200	44	East	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-18	Yes	Arctic fox	1	Running	SE	50	18	East	Yes	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-18	Yes	Caribou	2	Feeding	NW	200	93	West	Yes	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-19	Yes	Caribou	4	Foraging	NE	600	78	West	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-19	Yes	Caribou	3	Walking	NE	800	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-19	Yes	Caribou	3	Foraging	NE	900	80	West	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-19	Yes	Muskox	19	Lying Down	N/A	700	90	West	No	-96.22208	64.97501	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-09-20	Yes	Caribou	1	Trotting/running	SW	80	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-20	Yes	Caribou	4	Walking	NE	60	66	West	No	-96.33501	64.80451	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-20	Yes	Caribou	2	Trotting/running	W	150	28	West	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-20	Yes	Caribou	2	Foraging	N/A	60	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Muskox	1	Foraging	NE	80	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Muskox	20	Walking	N	1000	89	West	No	-96.21956	64.96744	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-09-21	Yes	Caribou	15	Foraging	SE	70	83	East	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Caribou	4	Walking	NW	800	77	West	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Caribou	5	Foraging	E	80	74	East	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Caribou	6	Walking	E	500	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Caribou	9	Walking	N	700	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Muskox	5	Foraging	N/A	2000	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	Yes	Caribou	1	Walking	W	100	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-21	Yes	Muskox	10	Foraging	N/A	1000	26	East	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-21	Yes	Muskox	2	Foraging	N/A	70	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-22	Yes	Muskox	11	Foraging	SE	70	26	East	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-23	Yes	Muskox	1	Walking	W	0	105	East	Yes	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-23	Yes	Caribou	2	Walking	S	100	26	West	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-23	Yes	Muskox	24	Foraging	N/A	300	19	West	No	-96.0866	64.4702	N/A	N/A	No	Exceeded!!	Called supervisor, speed restriction 30 km/h 18-19
Incidental	2024-09-23	Yes	Caribou	1	Walking	N/A	70	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-23	Yes	Muskox	13	Foraging	NW	100	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-23	Yes	Caribou	15	Lying Down	N/A	700	76	West	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-23	Yes	Caribou	17	Walking	S	200	84	West	Yes	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-23	Yes	Snowy owl	1	Flying	N/A	0	84	West	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-23	Yes	Muskox	24	Foraging	N/A	200	102	West	No	-96.12783	65.0517	N/A	N/A	No	Exceeded!!	Speed restriction km 102
Incidental	2024-09-24	N/A	Muskox	30	N/A	N/A	20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-09-24	N/A	Caribou	55	N/A	N/A	0	54	West	Yes	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-24	Yes	Arctic hare	3	Walking	E	10	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-24	Yes	Muskox	1	Feeding	E	25	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-25	Yes	Caribou	7	Walking	N	1100	72	West	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-25	Yes	Arctic fox	1	Walking	NE	800	65	East	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic hare	2	Resting	E	0	3	East	No	-95.98995	64.33765	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic hare	2	Milling	E	0	4	East	No	-95.99845	64.34605	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic hare	1	Running	E	25	7	East	No	-96.00916	64.37262	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic hare	2	Milling	E	25	20	East	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic hare	1	Alert	E	25	35	East	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic fox	1	Running	E	0	47	Both	Yes	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-09-26	Yes	Arctic hare	1	Alert	E	25	53	East	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-26	N/A	Caribou	5	N/A	N/A	0	58	N/A	N/A	N/A	N/A	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-26	Yes	Arctic hare	1	Alert	E	25	94	East	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-28	Yes	Muskox	3	Foraging	N/A	10	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-28	Yes	Caribou	15	Foraging	N	1500	19	East	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-28	Yes	Caribou	18	Foraging	N	2000	15	East	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-28	Yes	Siksik	1	Standing	N/A	5	19	East	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-28	Yes	Muskox	2	Foraging	N/A	750	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-28	Yes	Caribou	3	Trotting/running	E	750	47	East	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-28	Yes	Muskox	1	Foraging	N/A	1000	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-28	Yes	Arctic hare	2	Milling	N/A	50	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-29	Yes	Muskox	1	Foraging	S	150	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-29	Yes	Muskox	19	Resting	Not Recorded	1000	83	West	No	-96.30111	64.935	N/A	N/A	No	Exceeded!!	Speed restriction applied
Incidental	2024-09-29	Yes	Caribou	1	Standing	Not Recorded	200	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-29	Yes	Caribou	3	Alert	SW	200	47	East	No	-96.34656	64.65799	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-30	Yes	Muskox	2	Foraging	N/A	750	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-30	Yes	Arctic fox	1	Walking	SE	50	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-30	Yes	Caribou	1	Walking	S	500	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-02	Yes	Caribou	2	Foraging	N/A	300	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-02	Yes	Arctic fox	1	Running	E	350	28	East	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-04	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-10-04	Yes	Muskox	6	Feeding	N/A	5	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-04	Yes	Caribou	38	Walking	NW	1500	15	East	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-04	Yes	Caribou	5	Walking	N	75	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-05	Yes	Muskox	25	Foraging	N/A	5	96	East	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Speed restriction placed
Road	2024-10-05	Yes	Ptarmigan	7	Flying	S	5	75	West	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-05	Yes	Caribou	9	Foraging	N/A	350	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-05	Yes	Muskox	12	Foraging	N/A	750	30	East	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-05	Yes	Caribou	48	Foraging	N/A	2000	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-05	Yes	Muskox	1	Standing	N/A	25	20	East	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-05	Yes	Caribou	77	Walking	S	1500	19	East	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-05	Yes	Caribou	36	Walking	W	0	15	West,East	Yes	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-05	Yes	Caribou	65	Walking	SW	2500	19	West	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-05	Yes	Caribou	73	Foraging	N/A	1500	19	West	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-05	N/A	Caribou	500	N/A	N/A	1400	14	N/A	N/A	N/A	N/A	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-10-06	Yes	Muskox	13	Foraging	N/A	450	96	Both	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Muskox	13	Foraging	N/A	900	29	East	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Muskox	1	Foraging	N/A	30	20	East	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Arctic fox	1	Foraging	N/A	20	20	East	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Caribou	42	Walking	N	1000	19	East	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Caribou	1	Foraging	N	100	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Caribou	46	Foraging	N/A	250	15	East	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-06	Yes	Caribou	173	Foraging	N/A	1500	14	East	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-10-06	Yes	Ptarmigan	30	Resting	N/A	10	10	East	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-06	Yes	Caribou	2	Walking	N	250	12	East	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-07	Yes	Muskox	3	Feeding	N/A	400	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-07	Yes	Caribou	2	Walking	W	150	39	West	No	-96.27514	64.59586	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-07	Yes	Ptarmigan	38	Standing	N/A	0	37	Both	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-08	Yes	Muskox	1	Foraging	N/A	50	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-08	Yes	Arctic fox	1	Running	E	1000	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-08	Yes	Arctic fox	1	Running	E	0	25	East	Yes	-96.14948	64.5142	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-08	Yes	Muskox	18	Foraging	N/A	500	66	West	No	-96.33501	64.80451	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-10-09	Yes	Muskox	1	Foraging	N/A	25	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-09	Yes	Muskox	13	Foraging	N/A	1000	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-09	Yes	Muskox	3	Foraging	N/A	10	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-09	Yes	Muskox	20	Foraging	N/A	5	99	East	No	-96.15317	65.04196	N/A	N/A	No	Exceeded!!	Speed restriction from km 99-100
Road	2024-10-10	Yes	Muskox	20	Walking	S	5	99	East	No	-96.15317	65.04196	N/A	N/A	No	Exceeded!!	Speed restriction of 30 km/h at km 99
Road	2024-10-10	Yes	Muskox	1	Foraging	N/A	10	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-10	Yes	Muskox	3	Foraging	N/A	10	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-10	Yes	Muskox	4	Foraging	N/A	500	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-10	Yes	Arctic fox	2	Courting	N/A	50	20	West	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-10	Yes	Muskox	21	Foraging	N/A	20	100	West	No	-96.14649	65.04884	N/A	N/A	No	Exceeded!!	Speed restriction was placed the heard was moving closer to the road. 30 km/h km 100
Incidental	2024-10-10	Yes	Muskox	2	Foraging	N/A	101	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	19	Foraging	N/A	400	103	West	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Speed restriction put in place
Road	2024-10-11	Yes	Muskox	1	Foraging	N/A	2000	99	West	No	-96.15317	65.04196	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	2	Foraging	N/A	1000	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	3	Foraging	N/A	200	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	12	Foraging	N/A	400	28	East	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	1	Foraging	N/A	3000	24	West	No	-96.13651	64.50789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-12	Yes	Arctic fox	1	Running	E	0	87	East	Yes	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-12	Yes	Arctic fox	1	Running	E	50	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-10-13	Yes	Muskox	18	Foraging	N/A	600	103	West	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-10-13	Yes	Muskox	3	Foraging	N/A	300	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-13	Yes	Muskox	1	Foraging	N/A	60	44	East	No	-96.30352	64.64171	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Muskox	13	Foraging	NE	800	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Caribou	33	Walking	SE	500	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Muskox	10	Foraging	N/A	1500	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Muskox	10	Foraging	N/A	1500	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Snowy owl	1	Resting	E	600	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Muskox	4	Foraging	N/A	10	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-14	Yes	Muskox	4	Foraging	N/A	50	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-14	Yes	Muskox	1	Foraging	N/A	20	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-14	Yes	Muskox	13	Foraging	N/A	200	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-14	Yes	Arctic fox	1	Dead	N/A	0	18	Both	Yes	-96.0824	64.46103	N/A	Project related	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Caribou	3	Walking	N	400	14	East	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Caribou	19	Walking	NE	500	37	East	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-15	Yes	Muskox	4	Foraging	N/A	40	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-15	Yes	Caribou	8	Walking	E	1000	34	East	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-15	Yes	Caribou	3	Foraging	N/A	50	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-15	Yes	Caribou	16	Walking	NE	300	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-15	Yes	Caribou	2	Foraging	N	40	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-15	Yes	Caribou	58	Walking	NE	1	48	East	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-15	Yes	Muskox	21	Foraging	NW	500	53	West	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Road already closed due to road conditions
Road	2024-10-16	Yes	Muskox	4	Foraging	N/A	10	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-16	Yes	Caribou	41	Foraging	SE	50	84	East	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-16	Yes	Caribou	6	Lying Down	N/A	100	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-16	Yes	Muskox	4	Foraging	N/A	1500	58	West	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-16	Yes	Caribou	41	Walking	SE	50	76	East	Yes	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-16	Yes	Wolf	1	Hunting	N/A	500	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-16	Yes	Caribou	148	Walking	SE	50	74	West,East	Yes	-96.33028	64.87523	N/A	N/A	No	Exceeded!!	The road was closed at 2:00pm and all vehicles were escorted to their home bases
Road	2024-10-17	Yes	Muskox	5	Foraging	N/A	10	92	Both	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-17	Yes	Caribou	4	Walking	E	400	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-17	Yes	Caribou	56	Foraging	N/A	400	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-17	Yes	Muskox	23	Lying Down	N/A	400	103	West	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-10-19	Yes	Muskox	7	Foraging	W	15	90	Both	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-19	Yes	Muskox	1	Lying Down	N/A	15	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-19	Yes	Muskox	1	Foraging	N/A	700	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-19	Yes	Muskox	1	Foraging	N/A	1	89	West	N/A	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-20	Yes	Muskox	2	Foraging	N/A	90	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-20	Yes	Muskox	7	Foraging	N/A	70	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-20	Yes	Muskox	1	Foraging	N/A	40	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-20	Yes	Caribou	33	Lying Down	N/A	200	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-20	Yes	Caribou	26	Foraging	N/A	800	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-20	Yes	Caribou	4	Foraging	N/A	70	79	West	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-21	Yes	Muskox	1	Walking	W	25	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-21	Yes	Muskox	2	Feeding	Not Recorded	250	21	West	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-21	Yes	Muskox	1	Feeding	Not Recorded	30	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-22	Yes	Caribou	3	Foraging	N/A	50	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-23	Yes	Muskox	1	Foraging	N/A	60	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-23	Yes	Caribou	2	Walking	NW	800	75	West	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-23	Yes	Caribou	35	Walking	E	80	50	East	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-23	Yes	Caribou	2	Walking	E	60	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-23	Yes	Caribou	4	Foraging	N/A	50	68	West	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-23	Yes	Muskox	5	Lying Down	N/A	20	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-23	Yes	Muskox	1	Foraging	N/A	20	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-24	Yes	Muskox	3	Foraging	N/A	20	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-24	Yes	Muskox	5	Foraging	N/A	40	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-24	Yes	Muskox	1	Foraging	N/A	20	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-25	Yes	Muskox	3	Foraging	N/A	400	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-25	Yes	Muskox	5	Foraging	N/A	65	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-25	Yes	Arctic fox	1	Walking	W	35	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Muskox	2	Feeding	Not Recorded	50	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Muskox	2	Feeding	Not Recorded	250	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Muskox	3	Feeding	Not Recorded	100	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Muskox	2	Standing	Not Recorded	5	89	West	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Caribou	39	Alert	Not Recorded	200	65	East	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Caribou	5	Walking	N	100	14	East	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Caribou	150	Walking	NW	4000	7	West	No	-96.00916	64.37262	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-10-26	Yes	Caribou	60	Trotting/ running	S	1000	6	East	No	-96.00083	64.36427	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-26	Yes	Caribou	250	Walking	SW	4000	6	West	No	-96.00083	64.36427	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-10-26	Yes	Caribou	118	Running	N	100	5	East	No	-95.99998	64.35657	N/A	N/A	No	Exceeded!!	AWAR is closed
Incidental	2024-10-26	Yes	Caribou	300	Walking	NE	1000	4	East	No	-95.99845	64.34605	N/A	N/A	No	Exceeded!!	AWAR is closed to all traffic

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-10-26	Yes	Caribou	55	Walking	E	1000	6	East	No	-96.00083	64.36427	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-26	Yes	Caribou	200	Trotting/ running	E	750	13	East	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	AWAR is closed to all traffic
Incidental	2024-10-26	Yes	Caribou	27	Alert	N	750	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-26	Yes	Muskox	13	Feeding	Not Recorded	750	86	West	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Muskox	2	Foraging	N/A	500	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Muskox	3	Foraging	N/A	100	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Muskox	13	Foraging	N/A	250	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Ptarmigan	8	Flying	E	10	72	East	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Caribou	38	Resting	N/A	450	21	East	No	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Caribou	41	Foraging	N/A	1250	20	East	No	-96.09597	64.47868	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Caribou	21	Walking	N	2000	14	East	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-27	Yes	Caribou	500	Foraging	N/A	2500	11	East	No	-96.02386	64.40539	N/A	N/A	No	Exceeded!!	The group is outside the 1500 limit and across the lake
Incidental	2024-10-27	Yes	Caribou	94	Foraging	N/A	1250	14	East	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-10-27	Yes	Caribou	1000	Walking	W	500	13	East	Yes	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Road was closed yesterday
Incidental	2024-10-27	Yes	Caribou	750	Walking	W	300	13	East	Yes	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Road was closed yearerday and still closed
Incidental	2024-10-27	Yes	Caribou	150	Walking	S	300	15	East	No	-96.0525	64.43981	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-10-28	Yes	Muskox	10	Feeding	N	250	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-28	Yes	Caribou	13	Feeding	Not Recorded	250	87	West	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-28	Yes	Muskox	18	Feeding	Not Recorded	750	50	West	No	-96.3731	64.67942	N/A	N/A	No	Exceeded!!	AWAR is closed to all traffic
Road	2024-10-28	Yes	Caribou	3	Feeding	Not Recorded	1000	40	West	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-28	Yes	Caribou	200	Foraging	E	150	24	East	No	-96.13651	64.50789	N/A	N/A	No	Exceeded!!	AWAR is closed to all traffic
Road	2024-10-28	Yes	Caribou	500	Feeding	N	1500	16	East	No	-96.06242	64.44628	N/A	N/A	No	Exceeded!!	AWAR is closed to all traffic
Road	2024-10-28	Yes	Caribou	410	Alert	E	250	13	East	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	AWAR IS CLOSED
Incidental	2024-10-28	Yes	Caribou	500	Foraging	S	1500	13	East	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	AWAR IS CLOSED
Incidental	2024-10-28	Yes	Caribou	500	Walking	N	2500	15	East	No	-96.0525	64.43981	N/A	N/A	No	Exceeded!!	AWAR IS CLOSED
Incidental	2024-10-28	Yes	Caribou	37	Feeding	N	750	35	East	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-28	Yes	Muskox	21	Feeding	Not Recorded	500	50	West	No	-96.3731	64.67942	N/A	N/A	No	Exceeded!!	Awar closed
Road	2024-10-29	Yes	Muskox	13	Lying Down	N/A	400	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-29	Yes	Caribou	3	Lying Down	N/A	300	29	East	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-29	Yes	Caribou	30	Foraging	N/A	1000	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-29	Yes	Caribou	500	Walking	W	750	17	West	No	-96.07705	64.45326	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-10-29	Yes	Caribou	2	Standing	N/A	500	11	West	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-29	Yes	Muskox	3	Foraging	N/A	750	10	West	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-29	Yes	Caribou	1000	Foraging	N/A	2500	7	East	No	-96.00916	64.37262	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-10-29	Yes	Muskox	19	Foraging	N/A	300	51	West	No	-96.37907	64.69323	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-10-29	Yes	Caribou	1000	Walking	W	6	6	East	No	-96.00083	64.36427	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-10-31	Yes	Muskox	3	Standing	N/A	50	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Caribou	10	Walking	S	300	81	East	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Caribou	28	Standing	N/A	300	59	East	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Caribou	13	Foraging	N/A	300	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Caribou	25	Walking	W	1750	19	East	No	-96.0866	64.4702	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Caribou	850	Walking	SE	1500	14	East	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-10-31	Yes	Caribou	100	Walking	S	1300	19	East	No	-96.0866	64.4702	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-10-31	Yes	Muskox	19	Foraging	N/A	500	50	West	No	-96.3731	64.67942	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-01	Yes	Caribou	10	Walking	S	1000	81	East	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-01	Yes	Caribou	7	Walking	S	1500	41	West	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-01	Yes	Caribou	3	Foraging	N/A	1500	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-01	Yes	Caribou	500	Walking	SW	2000	21	East	No	-96.1045	64.48693	N/A	N/A	No	Exceeded!!	Roadmis closed and they are outside the 1500 limit
Road	2024-11-01	Yes	Caribou	750	Walking	S	750	18	East	No	-96.0824	64.46103	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-01	Yes	Caribou	25	Foraging	N/A	750	7	West	No	-96.00916	64.37262	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-01	Yes	Caribou	7	Foraging	N/A	500	9	East	No	-96.0143	64.38902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-01	Yes	Caribou	2	Walking	NW	500	13	East	No	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-01	Yes	Caribou	500	Walking	S	750	14	East	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-01	Yes	Caribou	59	Foraging	N/A	500	18	East	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-01	Yes	Muskox	2	Foraging	N/A	750	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-02	Yes	Muskox	2	Feeding	N/A	10	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-02	Yes	Arctic fox	1	Walking	N	0	94	Both	Yes	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-02	Yes	Wolf	6	Walking	N	300	52	Both	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-02	Yes	Muskox	22	Feeding	N/A	1000	49	West	No	-96.37072	64.6688	N/A	N/A	No	Exceeded!!	No restriction required.
Road	2024-11-02	Yes	Caribou	3	Foraging	N/A	700	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-02	Yes	Caribou	2	Resting	N/A	200	30	East	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-02	Yes	Caribou	400	Walking	SW	2000	20	East	No	-96.09597	64.47868	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-02	Yes	Caribou	4000	Walking	N	1200	19	East	No	-96.0866	64.4702	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-02	Yes	Caribou	2000	Walking	S	1000	13	East	No	N/A	N/A	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-11-02	Yes	Caribou	3	Walking	N	350	11	East	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-02	Yes	Caribou	150	Walking	N	2000	14	East	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-02	Yes	Caribou	115	Walking	W	500	17	East	No	-96.07705	64.45326	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-03	Yes	Muskox	13	Foraging	N/A	1000	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	11	Walking	S	500	72	East	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	1	Walking	S	1000	64	West	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	7	Walking	NW	400	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-11-03	Yes	Caribou	600	Walking	N	3000	23	East	No	-96.12442	64.50056	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-03	Yes	Caribou	100	Feeding	N/A	1500	22	East	No	-96.11256	64.4935	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-03	Yes	Caribou	15	Walking	W	0	21	Both	Yes	-96.1045	64.48693	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	110	Walking	S	2000	19	East	No	-96.0866	64.4702	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-03	Yes	Caribou	33	Foraging	N/A	500	18	East	No	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	108	Foraging	N/A	400	17	East	No	-96.07705	64.45326	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-03	Yes	Caribou	57	Walking	S	2000	17	East	No	-96.07705	64.45326	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	33	Foraging	N/A	1000	15	East	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	Yes	Caribou	200	Walking	S	2500	15	East	No	-96.0525	64.43981	N/A	N/A	No	Exceeded!!	Rosd closed
Road	2024-11-03	Yes	Caribou	200	Foraging	N/A	3000	13	East	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-03	Yes	Caribou	22	Walking	NW	500	16	West	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-03	Yes	Caribou	108	Resting	N/A	400	17	East	No	-96.07705	64.45326	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-03	Yes	Caribou	100	Walking	W	0	18	West	Yes	-96.0824	64.46103	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-03	Yes	Caribou	200	Walking	N	2000	23	East	No	-96.12442	64.50056	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-04	Yes	Muskox	2	Standing	N/A	300	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-04	Yes	Caribou	500	Walking	N	300	29	East	No	-96.18125	64.54733	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-04	Yes	Caribou	108	Resting	N/A	500	22	East	No	-96.11256	64.4935	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-04	Yes	Caribou	5000	Walking	E	0	6	Both	Yes	-96.00083	64.36427	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-04	Yes	Muskox	3	Feeding	N/A	150	11	West	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-04	Yes	Caribou	1	Injured	N/A	74	16	East	No	-96.06242	64.44628	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Muskox	1	Feeding	N/A	100	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Muskox	5	Foraging	N/A	750	96	West	N/A	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Caribou	2	Feeding	NW	100	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Caribou	1	Trotting/running	NE	400	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Caribou	174	Foraging	N/A	25	37	Both	Yes	-96.269	64.58416	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-05	Yes	Caribou	33	Walking	W	1000	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Caribou	68	Lying Down	N/A	75	29	East	No	-96.18125	64.54733	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Caribou	38	Foraging	N/A	300	11	East	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Muskox	3	Feeding	N/A	400	12	West	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-05	Yes	Caribou	175	Lying Down	N/A	1750	8	West	No	-96.01547	64.38131	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-05	Yes	Caribou	500	Lying Down	N/A	5000	6	West	No	-96.00083	64.36427	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-05	Yes	Caribou	115	Foraging	N/A	1100	8	West	No	-96.01547	64.38131	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-11-05	Yes	Caribou	7	Walking	W	300	13	North,East	Yes	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-05	Yes	Caribou	1	Walking	W	1000	80	East	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-06	Yes	Arctic fox	1	Alert	E	0	105	Both	Yes	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-06	Yes	Muskox	4	Feeding	N/A	650	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-06	Yes	Muskox	3	Feeding	N/A	200	95	East	N/A	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-06	Yes	Muskox	12	Feeding	N/A	450	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-06	Yes	Arctic fox	1	Running	E	0	18	Both	Yes	-96.0824	64.46103	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-06	Yes	Caribou	3	Feeding	N/A	150	10	East	No	-96.01786	64.3971	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-06	Yes	Muskox	1	Lying Down	N/A	50	5	West	No	-95.99998	64.35657	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-06	Yes	Muskox	23	Lying Down	N/A	3500	44	West	No	-96.30352	64.64171	N/A	N/A	No	Exceeded!!	Road already closed
Incidental	2024-11-06	Yes	Caribou	200	Walking	W	1500	14	East	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-11-07	Yes	Muskox	2	Feeding	N/A	20	96	Both	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-07	Yes	Muskox	4	Feeding	N/A	175	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-07	Yes	Muskox	11	Feeding	N/A	150	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-07	Yes	Caribou	54	Feeding	N/A	500	12	West	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-07	Yes	Caribou	129	Walking	W	200	11	West	No	-96.02386	64.40539	N/A	N/A	No	Exceeded!!	Road already closed
Incidental	2024-11-07	Yes	Caribou	4	Walking	N	300	4	East	No	-95.99845	64.34605	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-08	Yes	Caribou	600	Standing	N/A	800	13	West	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-11-08	Yes	Muskox	5	Resting	N/A	200	94	West	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-08	Yes	Caribou	12	Walking	NW	175	70	West	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-08	Yes	Caribou	3	Standing	N/A	200	64	East	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-08	Yes	Caribou	95	Feeding	S	2500	18	West	No	-96.0824	64.46103	N/A	N/A	No	Exceeded!!	Road already closed.
Road	2024-11-08	Yes	Caribou	1	Standing	N/A	200	12	West	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-08	Yes	Caribou	14	Walking	NW	75	32	East	No	-96.20446	64.56469	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-08	Yes	Caribou	24	Walking	SE	650	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-09	Yes	Muskox	11	Standing	N/A	500	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-09	Yes	Ptarmigan	20	Standing	N/A	0	1	East	N/A	-95.9717	64.32525	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-09	Yes	Caribou	144	Resting	N/A	800	24	West	No	-96.13651	64.50789	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-10	Yes	Caribou	2	Walking	E	100	67	East	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-10	Yes	Muskox	40	Feeding	N/A	100	12	West	No	-96.02992	64.41394	N/A	N/A	No	Exceeded!!	Road closed already
Road	2024-11-10	Yes	Caribou	4	Walking	W	80	11	West	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-10	Yes	Muskox	1	Feeding	N/A	80	8	West	No	-96.01547	64.38131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-11	Yes	Muskox	8	Feeding	N/A	150	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-11	Yes	Muskox	11	Feeding	N/A	150	93	West	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-11	Yes	Ptarmigan	15	Flying	W	5	26	West	No	-96.16146	64.52353	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-12	Yes	Muskox	3	Feeding	N/A	140	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-12	Yes	Muskox	17	Feeding	N/A	1700	44	West	No	-96.30352	64.64171	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-11-13	Yes	Muskox	23	Resting	Not Recorded	3000	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Muskox are in excess of 1500 m
Road	2024-11-13	Yes	Caribou	1	Walking	N	750	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-11-14	Yes	Muskox	11	Resting	Not Recorded	2000	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-14	Yes	Muskox	15	Foraging	E	50	95	East	No	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Road users were advised over the road channel of muskox group near the road km95 Speed restriction applied, km 95, 30 km/h
Road	2024-11-15	Yes	Muskox	1	Walking	NW	0	95	East	Yes	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-15	Yes	Muskox	23	Foraging	N	200	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-11-15	Yes	Caribou	3	Walking	S	100	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-16	Yes	Ptarmigan	2	Flying	S	5	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-16	Yes	Muskox	21	Foraging	N/A	250	94	West	N/A	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Speed restriction of 30km/h between km 93-95
Road	2024-11-16	Yes	Caribou	3	Foraging	N/A	250	54	West	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-16	Yes	Arctic fox	2	Standing	N/A	2	41	West	N/A	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-16	Yes	Muskox	7	Foraging	N/A	400	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-17	Yes	Ptarmigan	4	Walking	N/A	1	34	Both	N/A	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-17	Yes	Caribou	1	Foraging	N/A	100	83	West	No	-96.30111	64.935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-17	Yes	Muskox	14	Foraging	N/A	1500	14	West	No	-96.043	64.43121	N/A	N/A	No	Exceeded!!	They are far enough away from the road
Incidental	2024-11-17	Yes	Muskox	4	Foraging	N/A	700	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-11-19	Yes	Caribou	4	Foraging	N/A	700	35	West	No	-96.24426	64.57386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-19	Yes	Muskox	17	Foraging	N/A	700	9	West	No	-96.0143	64.38902	N/A	N/A	No	Exceeded!!	None, caribou are further than 500 m from road
Road	2024-11-20	Yes	Muskox	19	Lying Down	N/A	1000	44	West	No	-96.30352	64.64171	N/A	N/A	No	Exceeded!!	No measures needed, more than 500 m from road
Road	2024-11-20	Yes	Muskox	28	Feeding	Not Recorded	570	8	West	No	-96.01547	64.38131	N/A	N/A	No	Exceeded!!	More than 500 m from road, no need for measures
Incidental	2024-11-20	Yes	Muskox	29	Foraging	Not Recorded	500	8	West	No	-96.01547	64.38131	N/A	N/A	No	Exceeded!!	Further than 500 m from road, no need for speed restriction
Incidental	2024-11-20	Yes	Muskox	8	Walking	N/A	1500	41	West	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-21	Yes	Muskox	5	Resting	N/A	200	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-21	Yes	Caribou	83	Walking	SE	200	72	East	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-21	Yes	Wolf	1	Walking	SW	100	15	West	No	-96.0525	64.43981	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-21	Yes	Muskox	33	Resting	N/A	150	10	West	N/A	-96.01786	64.3971	N/A	N/A	No	Exceeded!!	Speed restriction 30 km
Road	2024-11-22	Yes	Muskox	5	Feeding	N/A	10	96	Both	N/A	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-22	Yes	Caribou	79	Feeding	N/A	500	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-22	Yes	Caribou	3	Walking	W	1500	46	West	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-22	Yes	Caribou	2	Running	E	300	40	East	No	-96.28144	64.60429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-22	Yes	Muskox	30	Resting	N/A	106	9	West	No	-96.0143	64.38902	N/A	N/A	No	Exceeded!!	Speed restriction in affect. AWAR restricted to light vehicles only
Incidental	2024-11-22	Yes	Caribou	2	Feeding	N/A	1000	48	East	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-22	Yes	Caribou	3	Walking	E	300	59	East	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-22	Yes	Muskox	6	Lying Down	N/A	100	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Muskox	6	Foraging	N/A	150	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Caribou	69	Foraging	N/A	1500	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Caribou	1	Walking	S	1000	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Caribou	9	Walking	S	750	59	East	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Caribou	70	Foraging	N/A	500	58	East	No	-96.35794	64.74165	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Muskox	1	Walking	E	500	11	East	No	-96.02386	64.40539	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-24	Yes	Muskox	24	Lying Down	N/A	300	9	West	No	-96.0143	64.38902	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-11-25	Yes	Muskox	9	Feeding	Not Recorded	1500	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-25	Yes	Caribou	35	Feeding	Not Recorded	360	46	East	No	-96.32957	64.65622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-25	Yes	Caribou	6	Foraging	S	800	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-25	Yes	Muskox	21	Feeding	N/A	1500	9	West	No	-96.0143	64.38902	N/A	N/A	No	Exceeded!!	Awar is closed
Incidental	2024-11-25	Yes	Caribou	186	Walking	W	350	48	East	No	-96.36878	64.66417	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-11-26	Yes	Muskox	13	Foraging	N/A	500	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Caribou	600	Foraging	SW	800	73	East	No	-96.32423	64.86213	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-26	Yes	Caribou	117	Walking	S	500	61	East	No	-96.35467	64.76327	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-26	Yes	Caribou	93	Feeding	S	400	33	East	No	-96.21631	64.57146	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-26	Yes	Caribou	3	Walking	NW	1000	48	West	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-26	Yes	Caribou	6	Walking	N	500	51	East	No	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-26	Yes	Caribou	300	Resting	N/A	200	62	East	No	-96.3444	64.77373	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-27	Yes	Caribou	14	Walking	S	600	81	East	No	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-27	Yes	Caribou	210	Walking	W	475	75	East	No	-96.33614	64.87946	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-27	Yes	Caribou	11	Foraging	N/A	300	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-27	Yes	Caribou	185	Walking	W	300	73	East	No	-96.32423	64.86213	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-27	Yes	Caribou	9	Foraging	N/A	750	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-27	Yes	Caribou	68	Foraging	N/A	500	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-27	Yes	Caribou	450	Walking	S	500	63	East	No	-96.34437	64.77932	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-27	Yes	Caribou	47	Walking	N	500	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-27	Yes	Caribou	62	Walking	N	500	27	West	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-27	Yes	Caribou	60	Walking	W	150	61	East	Yes	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Muskox	6	Lying Down	N/A	650	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	13	Standing	N/A	500	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	19	Walking	N	350	87	East	No	-96.24102	64.9542	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	66	Walking	S	500	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	28	Walking	N/A	500	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	200	Foraging	N/A	300	75	East	No	-96.33614	64.87946	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-28	Yes	Caribou	150	Foraging	N/A	100	69	East	No	-96.31427	64.82772	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-28	Yes	Caribou	53	Foraging	N/A	50	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-11-29	Yes	Muskox	6	Feeding	N/A	50	94	Both	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	64	Feeding	N/A	150	92	East	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	26	Foraging	N/A	150	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	55	Foraging	N/A	300	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Muskox	11	Lying Down	N/A	50	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	3	Walking	E	800	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	102	Foraging	N/A	400	84	East	No	-96.28276	64.9366	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-29	Yes	Caribou	261	Walking	S	500	81	Both	No	-96.30208	64.92518	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-29	Yes	Caribou	95	Walking	W	800	79	West	No	-96.31492	64.90953	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-29	Yes	Caribou	200	Foraging	W	350	78	East	Yes	-96.32437	64.90319	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-29	Yes	Caribou	9	Lying Down	N/A	500	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	41	Walking	W	50	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-29	Yes	Caribou	250	Walking	SE	100	76	East	No	-96.34565	64.88789	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-29	Yes	Caribou	56	Walking	SE	500	79	East	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-29	Yes	Caribou	35	Walking	W	2000	82	West	No	-96.31204	64.9306	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-29	Yes	Caribou	33	Feeding	N/A	600	86	East	No	-96.2528	64.94684	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-29	Yes	Caribou	160	Walking	W	1500	85	East	No	-96.26143	64.93886	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-30	Yes	Caribou	250	Feeding	W	10	98	East	No	-96.15765	65.03248	N/A	N/A	No	Exceeded!!	Road close No
Road	2024-11-30	Yes	Caribou	160	Walking	W	10	96	West	Yes	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Road close No
Road	2024-11-30	Yes	Caribou	6	Lying Down	N/A	50	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	200	Walking	W	1500	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Road close No
Road	2024-11-30	Yes	Caribou	3	Walking	E	250	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	20	Feeding	W	1500	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	12	Walking	W	2000	85	East	No	-96.26143	64.93886	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	4	Walking	E	150	78	East	No	-96.32437	64.90319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	40	Walking	S	1000	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	350	Walking	E	1000	72	East	No	-96.32384	64.85386	N/A	N/A	No	Exceeded!!	Road close No
Road	2024-11-30	Yes	Common raven	1	Flying	S	0	63	Both	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Arctic fox	1	Standing	N/A	50	37	West	No	-96.269	64.58416	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Caribou	500	Foraging	N/A	150	101	East	No	-96.14029	65.05669	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-12-01	Yes	Caribou	250	Foraging	N/A	200	94	East	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-12-01	Yes	Caribou	18	Foraging	NW	400	84	West	No	-96.28276	64.9366	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Caribou	96	Walking	S	300	62	East	No	-96.3444	64.77373	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-12-02	Yes	Caribou	189	Foraging	N/A	89	100	East	No	-96.14649	65.04884	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-12-02	Yes	Caribou	250	Foraging	N/A	100	96	Both	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-12-02	Yes	Caribou	200	Feeding	N/A	80	95	East	No	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-12-02	Yes	Caribou	19	Foraging	N/A	400	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-02	Yes	Wolf	2	Walking	E	50	81	East	Yes	-96.30208	64.92518	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-02	Yes	Caribou	149	Feeding	N/A	800	97	West	No	-96.17115	65.02594	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-12-02	Yes	Caribou	11	Feeding	N/A	300	101	West	No	-96.14029	65.05669	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-03	Yes	Muskox	7	Lying Down	N/A	300	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-03	Yes	Caribou	2	Walking	N	300	79	East	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-03	Yes	Caribou	66	Foraging	N/A	2500	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-03	Yes	Caribou	3	Walking	SW	500	69	West	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-03	Yes	Muskox	2	Feeding	N/A	100	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-03	Yes	Caribou	8	Lying Down	N/A	400	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-04	Yes	Muskox	6	Lying Down	N/A	100	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-04	Yes	Caribou	150	Walking	S	660	86	East	No	-96.2528	64.94684	N/A	N/A	No	Exceeded!!	Road closing
Road	2024-12-04	Yes	Caribou	85	Feeding	N/A	500	75	East	No	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-04	Yes	Caribou	76	Walking	N	900	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-04	Yes	Muskox	1	Walking	E	1	89	Both	Yes	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-04	Yes	Caribou	29	Lying Down	N/A	500	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-04	Yes	Caribou	15	Walking	S	600	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-04	Yes	Caribou	50	Walking	S	800	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-04	Yes	Caribou	11	Walking	S	500	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-04	Yes	Caribou	23	Walking	S	600	76	East	No	-96.34565	64.88789	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-05	Yes	Caribou	48	Feeding	N/A	150	97	East	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-05	Yes	Muskox	4	Standing	N/A	300	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-05	Yes	Caribou	85	Walking	S	600	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-05	Yes	Muskox	1	Standing	N/A	400	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-05	Yes	Caribou	110	Foraging	N/A	15	72	East	No	-96.32384	64.85386	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-12-05	Yes	Arctic fox	1	Running	E	15	54	East	Yes	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-05	Yes	Caribou	35	Walking	NE	400	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-05	Yes	Muskox	5	Lying Down	N/A	200	14	West	No	-96.043	64.43121	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-05	Yes	Caribou	7	Standing	N/A	600	59	West	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-05	Yes	Caribou	230	Lying Down	N/A	500	103	East	No	-96.11079	65.0489	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-12-06	Yes	Caribou	12	Walking	W	1000	102	East	No	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Caribou	11	Walking	N	40	102	West	Yes	-96.12783	65.0517	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Muskox	6	Foraging	N/A	600	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Muskox	4	Foraging	N/A	80	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Muskox	1	Foraging	N/A	20	92	West	No	-96.22191	64.99435	N/A	N/A	No	Not Exceeded	N/A

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-12-06	Yes	Muskox	8	Foraging	N/A	1000	91	West	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Caribou	3	Walking	W	50	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Caribou	13	Walking	NW	90	53	West	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Caribou	2	Foraging	N/A	1000	52	West	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-06	Yes	Caribou	10	Walking	W	200	43	East	No	-96.3007	64.63477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Caribou	15	Walking	NE	2000	103	West	No	-96.11079	65.0489	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Muskox	5	Foraging	N/A	600	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Muskox	4	Foraging	N/A	60	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Muskox	1	Walking	NE	300	94	East	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Caribou	5	Foraging	N/A	200	91	East	No	-96.22486	64.98469	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Caribou	8	Walking	SE	1000	105	East	No	-96.08773	65.03413	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Caribou	8	Foraging	SE	200	88	East	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Caribou	33	Walking	SE	2000	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-07	Yes	Caribou	9	Walking	SW	1000	45	West	No	-96.31336	64.65243	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-07	Yes	Caribou	15	Walking	NE	0	104	East	Yes	-96.09721	65.04458	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-08	Yes	Muskox	6	Foraging	N/A	60	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-08	Yes	Caribou	27	Walking	S	300	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-08	Yes	Caribou	200	Walking	S	300	63	East	No	-96.34437	64.77932	N/A	N/A	No	Exceeded!!	Road will be closed
Road	2024-12-08	Yes	Caribou	500	Walking	S	300	63	East	No	-96.34437	64.77932	N/A	N/A	No	Exceeded!!	Road will be closed
Road	2024-12-09	Yes	Muskox	5	Foraging	N/A	60	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-09	Yes	Muskox	3	Foraging	N/A	50	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-09	Yes	Caribou	6	Foraging	N/A	100	79	East	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-09	Yes	Caribou	19	Foraging	S	300	57	East	No	-96.36013	64.73137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-09	Yes	Caribou	52	Foraging	N/A	1000	53	East	No	-96.37309	64.70606	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-09	Yes	Caribou	8	Walking	W	0	75	West	Yes	-96.33614	64.87946	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-10	N/A	Muskox	6	N/A	N/A	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Not Exceeded	N/A
Incidental	2024-12-10	N/A	Caribou	200	N/A	N/A	800	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Exceeded!!	Road closed
Incidental	2024-12-09	Yes	Caribou	206	Walking	W	800	83	East	No	-96.30111	64.935	N/A	N/A	No	Exceeded!!	Road remains closed for the day and night
Road	2024-12-11	Yes	Muskox	6	Foraging	N/A	40	97	West	No	-96.17115	65.02594	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	6	Foraging	N/A	300	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Muskox	4	Lying Down	N/A	30	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	32	Foraging	N/A	1500	80	East	No	-96.30624	64.91707	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	44	Walking	W	400	77	East	No	-96.33908	64.89511	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Wolf	1	Running	SW	200	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	55	Walking	SW	250	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Wolf	2	Walking	SW	1000	73	East	No	-96.32423	64.86213	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	33	Walking	SW	900	67	East	No	-96.3262	64.81233	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	600	Walking	SW	800	58	East	No	-96.35794	64.74165	N/A	N/A	No	Exceeded!!	Road is already closed
Road	2024-12-11	Yes	Caribou	7	Foraging	N/A	500	56	West	No	-96.35139	64.72588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-12	Yes	Caribou	61	Walking	SW	0	52	Both	Yes	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-12	Yes	Caribou	258	Resting	N/A	900	50	East	No	-96.3731	64.67942	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-12-12	Yes	Caribou	105	Foraging	N/A	500	48	East	No	-96.36878	64.66417	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-12-12	Yes	Caribou	144	Walking	N	350	62	East	No	-96.3444	64.77373	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Incidental	2024-12-12	Yes	Caribou	400	Walking	N	100	45	East	No	-96.31336	64.65243	N/A	N/A	No	Exceeded!!	Awar is closed
Incidental	2024-12-12	Yes	Caribou	33	Walking	N	500	34	East	No	-96.24047	64.56875	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-13	Yes	Muskox	91	Resting	Not Recorded	100	94	Both	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-12-13	Yes	Muskox	9	Resting	Not Recorded	100	94	Both	No	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-13	Yes	Caribou	81	Walking	SW	100	70	East	No	-96.31652	64.83649	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-13	Yes	Caribou	41	Trotting/running	SE	500	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-13	Yes	Caribou	2	Walking	W	250	60	West	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-13	Yes	Muskox	6	Lying Down	Not Recorded	25	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Muskox	6	Lying Down	N/A	200	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Muskox	4	Lying Down	N/A	500	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Muskox	35	Foraging	N/A	3000	94	West	No	-96.21269	65.00751	N/A	N/A	No	Exceeded!!	Road closed already
Road	2024-12-14	Yes	Caribou	96	Foraging	N/A	2000	79	East	No	-96.31492	64.90953	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-12-14	Yes	Caribou	17	Walking	W	100	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Caribou	118	Foraging	N/A	200	56	East	No	-96.35139	64.72588	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-12-14	Yes	Caribou	16	Foraging	N/A	2000	49	East	No	-96.37072	64.6688	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Caribou	41	Foraging	N/A	1000	41	East	No	-96.28113	64.62028	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Caribou	19	Walking	N	2000	28	East	No	-96.17013	64.54131	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-14	Yes	Caribou	4	Foraging	N/A	1000	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-14	Yes	Caribou	4	Walking	SW	200	59	East	No	-96.37059	64.74953	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-14	Yes	Caribou	20	Foraging	N/A	400	89	East	No	-96.21956	64.96744	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-15	Yes	Muskox	16	Feeding	Not Recorded	100	96	Both	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	The AWAR is closed to all traffic
Road	2024-12-15	Yes	Caribou	106	Walking	S	2000	72	East	No	-96.32384	64.85386	N/A	N/A	No	Exceeded!!	The AWAR is closed to all traffic
Road	2024-12-15	Yes	Caribou	29	Feeding	N/A	500	65	East	No	-96.34062	64.7948	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-15	Yes	Caribou	33	Walking	S	1000	63	East	No	-96.34437	64.77932	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-15	Yes	Caribou	250	Foraging	S	200	57	East	No	-96.36013	64.73137	N/A	N/A	No	Exceeded!!	The AWAR is closed to all traffic
Incidental	2024-12-15	Yes	Caribou	3	Walking	W	500	88	West	No	-96.2206	64.95809	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-16	Yes	Muskox	9	Foraging	N/A	200	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-16	Yes	Muskox	42	Foraging	N/A	400	93	West	No	-96.22197	65.00077	N/A	N/A	No	Exceeded!!	Road already closed

Table A-1: Wildlife Observations along the All-Weather Access Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-12-16	Yes	Caribou	3	Foraging	N/A	500	90	West	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-16	Yes	Caribou	5	Walking	SW	600	64	East	No	-96.34001	64.78668	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-16	Yes	Caribou	100	Foraging	N/A	500	53	East	No	-96.37309	64.70606	N/A	N/A	No	Exceeded!!	Road closed already
Road	2024-12-16	Yes	Caribou	200	Walking	SW	1000	52	West	No	-96.37745	64.70086	N/A	N/A	No	Exceeded!!	Road closed aleady
Road	2024-12-16	Yes	Caribou	22	Foraging	N/A	300	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-16	Yes	Caribou	5	Walking	E	300	48	East	No	-96.36878	64.66417	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-16	Yes	Caribou	92	Foraging	N/A	500	45	East	No	-96.31336	64.65243	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-12-16	Yes	Caribou	98	Lying Down	N/A	30	15	East	No	-96.0525	64.43981	N/A	N/A	No	Exceeded!!	Road already closed
Incidental	2024-12-16	Yes	Caribou	24	Foraging	SW	2000	23	East	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-17	Yes	Muskox	11	Feeding	Not Recorded	500	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-17	Yes	Caribou	11	Walking	S	500	72	East	No	-96.32384	64.85386	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-17	Yes	Caribou	57	Feeding	Not Recorded	500	71	East	No	-96.3197	64.84471	N/A	N/A	No	Exceeded!!	Awar is closed to all traffic
Road	2024-12-17	Yes	Caribou	21	Walking	E	250	69	East	No	-96.31427	64.82772	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-17	Yes	Caribou	20	Walking	N	1000	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-17	Yes	Caribou	10	Trotting/running	E	1000	54	East	No	-96.35835	64.71319	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-17	Yes	Caribou	160	Walking	N	2000	26	East	No	-96.16146	64.52353	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-12-17	Yes	Caribou	3	Standing	Not Recorded	750	13	East	No	-96.03681	64.42344	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-17	Yes	Caribou	19	Walking	N	150	33	East	No	-96.21631	64.57146	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-17	Yes	Caribou	3	Walking	W	0	51	East	Yes	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-17	Yes	Caribou	4	Walking	E	2000	68	East	No	-96.32681	64.82032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Muskox	5	Resting	Not Recorded	1500	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Caribou	24	Feeding	Not Recorded	1000	79	East	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Caribou	33	Resting	Not Recorded	500	69	East	No	-96.31427	64.82772	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-12-18	Yes	Caribou	17	Resting	Not Recorded	1500	62	East	No	-96.3444	64.77373	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Caribou	15	Resting	Not Recorded	1500	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Caribou	7	Walking	N	500	60	East	No	-96.36363	64.75548	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Caribou	16	Standing	W	0	52	Both	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-18	Yes	Caribou	40	Walking	N	500	31	East	No	-96.19574	64.55426	N/A	N/A	No	Exceeded!!	AWAR is closed
Road	2024-12-18	Yes	Caribou	3	Walking	E	2000	27	East	No	-96.16125	64.53222	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-18	Yes	Caribou	4	Walking	E	750	36	East	No	-96.26192	64.58043	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-18	Yes	Caribou	12	Resting	Not Recorded	500	52	East	No	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-19	Yes	Muskox	55	Resting	N/A	2000	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Outside the 1500 m threshold
Road	2024-12-19	Yes	Arctic hare	1	Dead	N/A	0	18	East	No	-96.0824	64.46103	N/A	Project related	No	Not Exceeded	N/A
Road	2024-12-20	Yes	Muskox	6	Feeding	Not Recorded	2000	98	East	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-20	Yes	Muskox	60	Resting	Not Recorded	750	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Speed restriction applied km 95-98
Road	2024-12-20	Yes	Muskox	6	Feeding	Not Recorded	2000	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-20	Yes	Muskox	1	Resting	Not Recorded	100	5	West	No	-95.99998	64.35657	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-20	Yes	Muskox	6	Lying Down	N/A	1000	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-20	Yes	Muskox	43	Lying Down	N/A	750	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Speed restriction is in effect
Road	2024-12-21	Yes	Muskox	53	Feeding	N/A	1000	96	West	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Speed restriction already in place
Road	2024-12-21	Yes	Muskox	3	Lying Down	N/A	600	95	East	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-21	Yes	Caribou	15	Feeding	N/A	800	90	East	No	-96.22208	64.97501	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-21	Yes	Caribou	19	Walking	W	1	52	East	Yes	-96.37745	64.70086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-21	Yes	Caribou	4	Walking	SE	600	50	East	No	-96.3731	64.67942	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-21	Yes	Muskox	19	Lying Down	N/A	800	13	West	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Speed restriction in effect
Road	2024-12-22	Yes	Caribou	13	Walking	W	1500	98	West	No	-96.15765	65.03248	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-22	Yes	Arctic fox	1	Running	N/A	50	30	East	No	-96.19577	64.55431	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-22	Yes	Caribou	1	Lying Down	N/A	900	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-22	Yes	Caribou	4	Walking	S	1000	12	East	No	-96.02992	64.41394	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-23	Yes	Muskox	23	Lying Down	N/A	600	96	East	No	-96.18089	65.0181	N/A	N/A	No	Exceeded!!	Speed restriction applied
Road	2024-12-23	Yes	Muskox	3	Lying Down	N/A	600	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-23	Yes	Caribou	5	Foraging	N/A	800	95	West	No	-96.19522	65.01286	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-23	Yes	Caribou	1	Lying Down	N/A	600	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-23	Yes	Muskox	23	Foraging	N/A	1500	13	West	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Speed restriction still in effect from km 12 to 14
Road	2024-12-24	Yes	Muskox	43	Foraging	N/A	1500	95	West	No	-96.19522	65.01286	N/A	N/A	No	Exceeded!!	Speed restriction is in place
Road	2024-12-24	Yes	Muskox	3	Lying Down	N/A	1000	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-24	Yes	Arctic fox	1	Running	NW	1	51	East	Yes	-96.37907	64.69323	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-24	Yes	Caribou	1	Lying Down	N/A	1500	23	West	No	-96.12442	64.50056	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-24	Yes	Muskox	26	Lying Down	N/A	800	13	West	No	-96.03681	64.42344	N/A	N/A	No	Exceeded!!	Speed restriction in effect
Incidental	2024-12-24	Yes	Caribou	7	Foraging	N	800	22	West	No	-96.11256	64.4935	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-24	Yes	Wolf	1	Walking	N	500	61	East	No	-96.35467	64.76327	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-24	Yes	Arctic fox	1	Walking	SW	1	94	East	Yes	-96.21269	65.00751	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-25	Yes	Muskox	3	Lying Down	N/A	800	96	East	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-28	Yes	Caribou	11	Walking	N	850	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-28	Yes	Caribou	5	Walking	SE	600	79	East	No	-96.31492	64.90953	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-28	Yes	Caribou	7	Feeding	N/A	800	74	West	No	-96.33028	64.87523	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-29	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-12-31	Yes	Muskox	1	Foraging	N/A	150	96	West	No	-96.18089	65.0181	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-31	Yes	Muskox	4	Lying Down	N/A	800	93	East	No	-96.22197	65.00077	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-01-01	Yes	Wolf	1	Running	SW	800	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-01	Yes	Caribou	23	Walking	N	1200	144	East	No	-96.41376	65.29401	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-03	Yes	Arctic hare	2	Feeding	N/A	100	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-05	Yes	Common raven	1	Flying	N	0	128	Both	N/A	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-05	Yes	Muskox	13	Feeding	N/A	150	152	East	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-05	Yes	Muskox	2	Feeding	N/A	50	165	East	No	-96.46782	65.32389	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-07	Yes	Muskox	27	Feeding	N/A	75	151	West	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-01-09	Yes	Muskox	4	Feeding	N/A	800	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-11	Yes	Muskox	7	Resting	Not Recorded	50	144	East	No	-96.04549	65.08313	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-16	Yes	Muskox	18	Foraging	N/A	100	150	East	No	-96.45008	65.23022	N/A	N/A	No	Exceeded!!	Speed restriction km 150
Road	2024-01-16	Yes	Caribou	8	Feeding	Not Recorded	700	144	East	No	-96.39203	65.22583	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-16	Yes	Caribou	6	Foraging	N/A	400	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-16	Yes	Muskox	7	Foraging	N/A	1500	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-16	Yes	Muskox	15	Foraging	N/A	300	121	West	No	-96.08638	65.10712	N/A	N/A	No	Exceeded!!	Speed resriction km 121 applied
Incidental	2024-01-17	Yes	Muskox	16	Lying Down	N/A	200	151	East	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	Speed restriction km 151-152
Incidental	2024-01-17	Yes	Caribou	9	Foraging	N/A	500	144	East	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-17	Yes	Caribou	9	Foraging	N/A	400	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-17	Yes	Muskox	15	Resting	N/A	600	121	West	No	-96.08638	65.10712	N/A	N/A	No	Exceeded!!	Speed resteiction already in place km 121
Road	2024-01-17	Yes	Caribou	4	Foraging	N/A	200	122	East	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-17	Yes	Muskox	18	Resting	N/A	50	151	East	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between the km 150-151. 30 km/h and beacon off.
Incidental	2024-01-19	Yes	Arctic fox	1	Trotting/running	W	0	176	East	Yes	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-19	Yes	Muskox	17	Resting	N/A	100	152	East	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between the km 151 and 152.
Road	2024-01-19	Yes	Caribou	1	Walking	S	325	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Caribou	2	Standing	Not Recorded	1000	166	East	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-21	Yes	Muskox	16	Feeding	N/A	50	149	East	No	-96.44264	65.22327	N/A	N/A	No	Exceeded!!	Speed restriction has been applied
Road	2024-01-21	Yes	Caribou	9	Lying Down	N/A	250	145	East	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-23	Yes	Muskox	16	Resting	N/A	300	148	East	No	-96.42744	65.22048	N/A	N/A	No	Exceeded!!	Speed restriction put in place between km 148 and 149. 30 km/h no beacon.
Incidental	2024-01-23	Yes	Caribou	5	Foraging	N/A	200	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-23	Yes	Wolf	5	Trotting/running	E	100	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-25	Yes	Caribou	4	Standing	N/A	800	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-25	Yes	Muskox	17	Feeding	N/A	30	148	East	No	-96.42744	65.22048	N/A	N/A	No	Exceeded!!	Speed restriction put in place 147-149
Road	2024-01-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-01-29	Yes	Arctic fox	1	Running	W	10	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-29	Yes	Caribou	9	Foraging	N/A	1500	110	East	No	-96.04065	65.0414	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-01-29	Yes	Caribou	2	Foraging	N/A	300	111	East	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-31	Yes	Arctic fox	1	Trotting/running	E	5	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-31	Yes	Muskox	19	Foraging	N/A	150	146	East	No	-96.39801	65.22627	N/A	N/A	No	Exceeded!!	Speed restriction in place between km 145 and 147. Message was given on the radio by dispatch to all road users.
Road	2024-01-31	Yes	Caribou	3	Foraging	N/A	375	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-31	Yes	Muskox	5	Foraging	N/A	350	122	East	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-01-31	Yes	Caribou	9	Foraging	N	350	113	East	No	-95.99327	65.0588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Muskox	23	Foraging	N/A	400	151	West	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	Speed restriction applied km 150-152
Road	2024-02-02	Yes	Caribou	14	Feeding	Not Recorded	150	142	East	No	-96.3371	65.22219	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-02	Yes	Caribou	2	Foraging	N/A	600	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-02	Yes	Muskox	17	Foraging	N/A	100	145	East	No	-96.3769	65.22422	N/A	N/A	No	Exceeded!!	Speed restriction applied km144-146
Road	2024-02-04	Yes	Muskox	17	Resting	N/A	100	144	East	N/A	-96.0971	65.11493	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-02-06	Yes	Muskox	15	Feeding	N/A	100	145	East	No	-96.3769	65.22422	N/A	N/A	No	Exceeded!!	Speed rest. 144-146
Road	2024-02-06	Yes	Muskox	7	Standing	N/A	2500	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-08	Yes	Muskox	18	Resting	N/A	1000	145	East	No	-96.3769	65.22422	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-02-10	Yes	Muskox	16	Lying Down	Not Recorded	100	145	East	No	-96.3769	65.22422	N/A	N/A	No	Exceeded!!	Speed restriction is applied
Incidental	2024-02-10	Yes	Wolf	2	Walking	S	20	168	West	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-11	Yes	Muskox	22	Feeding	N/A	200	148	West	N/A	-96.42744	65.22048	N/A	N/A	No	Exceeded!!	Speed restriction applied km 147-149
Road	2024-02-15	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-02-15	Yes	Muskox	27	Foraging	N/A	150	149	West	No	-96.44264	65.22327	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between km 147-149 (30km/h no beacon)
Incidental	2024-02-16	Yes	Muskox	20	Lying Down	N/A	300	146	East	No	-96.39801	65.22627	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between km 145-147 (30km/h)
Road	2024-02-18	Yes	Muskox	35	Alert	E	50	145	East	No	-96.3769	65.22422	N/A	N/A	No	Exceeded!!	Alerted enviromental department, speed restriction applied between km144-146, road supervisor aware and let road users know.
Road	2024-02-18	Yes	Wolf	3	Walking	N/A	70	145	East	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-02-18	Yes	Caribou	15	Standing	Not Recorded	500	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-20	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-02-20	Yes	Muskox	48	Foraging	N/A	600	147	East	No	-96.41835	65.22786	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-02-25	Yes	Muskox	4	Lying Down	N/A	25	156	West	No	-96.45207	65.26222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Caribou	2	Foraging	N	300	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-02-25	Yes	Muskox	5	Foraging	N/A	150	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-03-03	Yes	Muskox	4	Resting	N/A	2000	158	West	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-07	Yes	Muskox	16	Feeding	N/A	650	140	West	No	-96.29851	65.22197	N/A	N/A	No	Exceeded!!	Speed restriction at km 140
Road	2024-03-07	Yes	Muskox	10	Resting	N/A	1500	118	West	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-08	Yes	Muskox	8	Standing	N/A	800	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-15	Yes	Muskox	20	Foraging	N/A	400	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between km 119 and 120

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-03-17	Yes	Muskox	3	Foraging	N/A	450	159	East	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-17	Yes	Muskox	7	Foraging	N/A	10	140	Both	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-17	Yes	Arctic fox	1	Running	N	20	114	West	No	-96.00424	65.06679	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-17	Yes	Muskox	37	Resting	N/A	100	159	East	No	-96.40886	65.28601	N/A	N/A	No	Exceeded!!	Speed restriction put in place between km 158 and 160.
Incidental	2024-03-20	Yes	Muskox	25	Lying Down	N/A	450	147	West	No	-96.41835	65.22786	N/A	N/A	No	Exceeded!!	Speed restriction put in place km 146 to 148, 30 km/h
Incidental	2024-03-21	Yes	Caribou	11	Walking	N/A	1000	111	West	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-21	Yes	Caribou	2	Foraging	N/A	500	141	East	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-03-21	Yes	Muskox	44	Lying Down	N/A	2000	167	West	No	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	They are 2000 m away from the road
Road	2024-03-23	Yes	Muskox	2	Standing	N/A	600	154	West	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-25	Yes	Caribou	8	Foraging	N/A	300	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-25	Yes	Caribou	7	Foraging	N/A	150	119	East	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-27	Yes	Common raven	1	Flying	W	0	123	Both	Yes	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-29	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-03-31	Yes	Caribou	8	Resting	N/A	400	146	West	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-03-31	Yes	Muskox	31	Foraging	N/A	100	153	East	No	-96.47626	65.24823	N/A	N/A	No	Exceeded!!	Speed restriction at km 152-154
Road	2024-04-02	Yes	Muskox	35	Lying Down	N/A	900	152	East	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Speed restrictions were put in place
Road	2024-04-03	Yes	Caribou	11	Foraging	N/A	1000	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-05	Yes	Caribou	20	Walking	S	500	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-05	Yes	Caribou	8	Feeding	N/A	100	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-05	Yes	Muskox	8	Resting	N/A	350	143	West	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-05	Yes	Muskox	3	Feeding	N/A	500	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-05	Yes	Caribou	2	Foraging	S	100	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-05	Yes	Caribou	8	Lying Down	Not Recorded	250	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-06	Yes	Caribou	9	Feeding	N/A	100	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-06	Yes	Muskox	8	Feeding	N/A	100	144	West	No	-96.36149	65.22278	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-06	Yes	Caribou	4	Feeding	N/A	200	116	West	No	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-06	Yes	Caribou	13	Feeding	N/A	2000	113	West	No	-95.99327	65.0588	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-06	Yes	Caribou	2	Foraging	N	100	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Arctic fox	1	Trotting/running	W	0	169	Both	Yes	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Caribou	11	Feeding	Not Recorded	50	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Muskox	5	Lying Down	Not Recorded	500	143	West	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-07	Yes	Arctic hare	1	Trotting/running	W	0	140	Both	Yes	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-08	Yes	Muskox	8	Feeding	N/A	150	143	West	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-08	Yes	Caribou	2	Feeding	N/A	50	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-08	Yes	Caribou	45	Foraging	S	500	115	West	No	-96.00905	65.07112	N/A	N/A	No	Exceeded!!	Road has been closed Env monitoring caribou behaviour from a distance
Incidental	2024-04-08	Yes	Muskox	8	Feeding	Not Recorded	100	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-09	Yes	Ptarmigan	7	Resting	Not Recorded	30	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-09	Yes	Muskox	7	Feeding	Not Recorded	40	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-09	Yes	Caribou	15	Feeding	Not Recorded	1000	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-09	Yes	Caribou	180	Walking	S	100	120	West	No	-96.0728	65.10021	N/A	N/A	No	Exceeded!!	WTHR is closed to all traffic
Incidental	2024-04-09	Yes	Caribou	23	Foraging	N	800	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-09	Yes	Caribou	16	Walking	E	200	135	West	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-09	Yes	Caribou	22	Standing	W	600	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-09	Yes	Caribou	9	Resting	Not Recorded	100	147	East	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	71	Feeding	W	150	176	West	No	-96.60379	65.38622	N/A	N/A	No	Exceeded!!	WTHR is closed to traffic Env techs will escort crew bus and cube truck
Road	2024-04-10	Yes	Caribou	33	Walking	S	500	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	9	Resting	Not Recorded	200	146	West	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-10	Yes	Caribou	85	Resting	Not Recorded	50	139	West	No	-96.27997	65.22686	N/A	N/A	No	Exceeded!!	Wthr is closed to traffic Env techs are providing escort to crew busses and cube truck through this area
Road	2024-04-10	Yes	Caribou	46	Walking	S	1000	128	West	No	-96.13583	65.16137	N/A	N/A	No	Exceeded!!	Wthr is closed to traffic Env techs escorting crew busses and cube truck
Road	2024-04-10	Yes	Caribou	48	Feeding	N/A	800	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	WTHR is closed to traffic Env techs escorting crew busses and cube truck
Road	2024-04-11	Yes	Caribou	34	Walking	N	150	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-11	Yes	Caribou	49	Resting	N/A	200	139	West	N/A	-96.27997	65.22686	N/A	N/A	No	Exceeded!!	Road is closed to all traffic. Convoy is done for the crew buses and food truck.
Road	2024-04-11	Yes	Caribou	11	Alert	N/A	50	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-11	Yes	Caribou	15	Walking	S	300	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Wolf	2	Walking	NE	15	177	East	No	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Muskox	17	Foraging	N/A	1000	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-11	Yes	Caribou	12	Trotting/running	N/A	1500	129	West	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Caribou	36	Walking	S	700	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Caribou	2	Walking	S	100	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Caribou	4	Walking	S	1000	170	West	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-11	Yes	Caribou	35	Alert	N/A	400	173	West	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-13	Yes	Caribou	60	Running	N/A	100	151	West	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	WTHR is closed Env tech providing escorts to crew busses and cube truck.
Road	2024-04-15	Yes	Caribou	500	Foraging	NW	50	176	West	No	-96.60379	65.38622	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-15	Yes	Caribou	70	Walking	NW	50	172	West	No	-96.58667	65.35504	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-15	Yes	Caribou	25	Alert	NW	200	170	West	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	8	Alert	NW	200	164	West	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	40	Walking	N	300	162	West	No	-96.4168	65.31155	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-15	Yes	Caribou	15	Alert	W	100	157	West	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Muskox	8	Feeding	N/A	50	143	East	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-04-15	Yes	Caribou	20	Standing	N/A	1000	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	6	Running	S	500	129	West	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	20	Standing	N/A	500	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Muskox	15	Running	W	100	121	West	No	-96.08638	65.10712	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-15	Yes	Caribou	14	Running	S	200	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Muskox	3	Alert	N/A	10	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	7	Trotting/running	N	200	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-15	Yes	Caribou	44	Walking	E	0	113	Both	Yes	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-15	Yes	Caribou	110	Walking	E	500	113	East	Yes	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-17	Yes	Caribou	56	Foraging	N/A	100	179	West	No	-96.66548	65.40253	N/A	N/A	No	Exceeded!!	Road is closed to all traffic. Convoy only going at speed restriction.
Road	2024-04-17	Yes	Caribou	53	Walking	S	600	177	West	No	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-04-17	Yes	Caribou	11	Walking	SW	350	172	West	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-17	Yes	Caribou	400	Resting	N/A	1000	167	West	No	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-04-17	Yes	Caribou	350	Standing	N/A	100	165	West	No	-96.46782	65.32389	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-17	Yes	Caribou	120	Walking	S	400	127	West	No	-96.12549	65.15381	N/A	N/A	No	Exceeded!!	Road already closed
Incidental	2024-04-17	Yes	Caribou	10	Trotting/running	NW	500	130	West	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Caribou	40	Foraging	N/A	300	136	West	No	-96.2274	65.21308	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-17	Yes	Caribou	100	Walking	S	1000	137	West	No	-96.2415	65.21944	N/A	N/A	No	Exceeded!!	Road already closed
Incidental	2024-04-17	Yes	Muskox	8	Foraging	N/A	200	142	East	No	-96.3371	65.22219	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Caribou	20	Foraging	N/A	400	150	West	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-17	Yes	Caribou	400	Foraging	NW	50	161	West	No	-96.41207	65.30324	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-17	Yes	Caribou	250	Foraging	N/A	800	167	West	No	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-17	Yes	Caribou	300	Foraging	NW	50	172	West	No	-96.58667	65.35504	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-19	Yes	Caribou	60	Walking	E	0	177	Both	Yes	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-19	Yes	Caribou	10	Standing	S	350	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	360	Resting	N/A	100	174	Both	No	-96.60128	65.36832	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-19	Yes	Caribou	16	Walking	E	0	169	Both	Yes	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	450	Walking	N	150	167	West	No	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-19	Yes	Caribou	120	Foraging	N/A	150	161	East	No	-96.41207	65.30324	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-19	Yes	Caribou	150	Foraging	S	300	159	West	No	-96.40886	65.28601	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-19	Yes	Caribou	30	Foraging	N/A	750	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	60	Standing	N/A	300	152	West	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-19	Yes	Caribou	15	Trotting/running	SW	50	148	Both	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	25	Walking	S	400	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	11	Foraging	N/A	200	136	West	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	8	Foraging	N/A	1500	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-19	Yes	Caribou	8	Walking	E	1500	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	21	Alert	N/A	75	120	West,East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Muskox	1	Foraging	N/A	300	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	57	Foraging	N/A	1200	124	West	No	-96.10808	65.13155	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-19	Yes	Caribou	6	Trotting/running	N	500	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	55	Walking	S	450	129	East	No	-96.14593	65.16902	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-19	Yes	Caribou	2	Foraging	N/A	400	136	West	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	3	Alert	S	400	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	3	Trotting/running	E	75	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	5	Foraging	N/A	1000	154	West	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-19	Yes	Caribou	400	Foraging	N/A	400	157	West	No	-96.41584	65.27123	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-19	Yes	Caribou	100	Foraging	NE	350	167	West	No	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-19	Yes	Caribou	175	Walking	N	150	173	East	No	-96.60297	65.35972	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-19	Yes	Caribou	140	Resting	N/A	400	175	West	No	-96.60237	65.37726	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-19	Yes	Caribou	110	Walking	E	0	177	West,East	Yes	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-21	Yes	Caribou	12	Walking	N	200	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	14	Walking	S	500	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	14	Resting	N/A	400	168	West	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	27	Standing	S	600	168	West	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	11	Walking	N	400	166	West	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	26	Walking	S	1000	164	West	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	300	Resting	N/A	800	160	West	No	-96.41356	65.29429	N/A	N/A	No	Exceeded!!	Road is closed to all taffic
Road	2024-04-21	Yes	Caribou	90	Foraging	N/A	200	156	West	No	-96.45207	65.26222	N/A	N/A	No	Exceeded!!	Road is closed too all traffic
Road	2024-04-21	Yes	Caribou	220	Foraging	N/A	0	152	West	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-21	Yes	Caribou	3	Foraging	N/A	1500	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	6	Foraging	N/A	1000	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	125	Foraging	N/A	300	146	Both	No	-96.39801	65.22627	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-21	Yes	Muskox	5	Foraging	N/A	750	141	East	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	3	Walking	N	800	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	6	Foraging	N/A	800	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	6	Foraging	N/A	500	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	3	Walking	N	800	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	5	Walking	S	750	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-21	Yes	Caribou	7	Foraging	N/A	750	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-04-21	Yes	Caribou	3	Walking	NW	300	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	6	Standing	N/A	500	115	West	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	8	Standing	N/A	1500	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	12	Walking	N/A	1000	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	7	Resting	N/A	700	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	153	Walking	N/A	150	152	West,East	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-21	Yes	Caribou	25	Foraging	N/A	200	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	2	Standing	N/A	300	158	East	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	60	Resting	N/A	1000	160	West	No	-96.41356	65.29429	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-21	Yes	Caribou	7	Standing	N/A	500	162	West	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	2	Foraging	N/A	650	163	West	No	-96.4304	65.31741	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	25	Walking	N/A	400	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	9	Foraging	N/A	500	173	West	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-21	Yes	Caribou	21	Standing	N/A	100	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	13	Walking	E	100	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	34	Standing	N/A	300	169	Both	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	74	Walking	SE	400	166	West	No	-96.48819	65.32529	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-22	Yes	Caribou	19	Foraging	N/A	1500	166	East	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	150	Standing	N/A	300	163	Both	Yes	-96.4304	65.31741	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-22	Yes	Caribou	70	Trotting/running	S	1500	158	West	No	-96.40471	65.27776	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-22	Yes	Caribou	10	Standing	N/A	1200	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	9	Standing	N/A	650	152	West	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	2	Walking	S	550	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	18	Walking	N	25	146	East	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Muskox	9	Standing	N/A	700	141	East	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	6	Standing	S	500	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	8	Trotting/running	S	500	131	West	No	-96.16073	65.18551	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	9	Trotting/running	S	600	129	West	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	130	Foraging	N/A	300	126	East	No	-96.11084	65.14818	N/A	N/A	No	Exceeded!!	Road is coosed to all traffic
Road	2024-04-22	Yes	Caribou	32	Walking	S	300	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	3	Standing	N/A	600	117	West	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-22	Yes	Caribou	119	Walking	E	0	112	Both	Yes	-96.00217	65.05112	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	170	Trotting/running	E	0	126	West,East	Yes	-96.11084	65.14818	N/A	N/A	No	Exceeded!!	Road is closed to all traffic. Convoy was stopped to let the group crossed the road West to East.
Incidental	2024-04-22	Yes	Caribou	50	Walking	S	600	127	West	No	-96.12549	65.15381	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	160	Walking	S	600	128	West	No	-96.13583	65.16137	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	100	Walking	S	1500	130	West	No	-96.1528	65.17815	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	67	Walking	S	1500	134	West	No	-96.19286	65.20481	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	2	Foraging	E	25	136	East	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-22	Yes	Caribou	13	Foraging	N/A	200	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-22	Yes	Caribou	110	Standing	S	500	152	West	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	140	Walking	SE	0	154	West,East	Yes	-96.46296	65.2546	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	47	Resting	N/A	400	163	West	No	-96.4304	65.31741	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Incidental	2024-04-22	Yes	Caribou	45	Walking	N	600	165	West	No	-96.46782	65.32389	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-23	Yes	Caribou	320	Lying Down	N/A	150	177	West	No	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-23	Yes	Caribou	7	Foraging	N/A	300	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	5	Foraging	N/A	200	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	22	Walking	S	500	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	15	Walking	W	1500	154	West	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	350	Walking	NE	700	151	West	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-23	Yes	Caribou	9	Walking	NE	100	147	East	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	65	Foraging	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-23	Yes	Caribou	75	Walking	N	400	139	West	No	-96.27997	65.22686	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-23	Yes	Caribou	90	Lying Down	N/A	100	137	West	No	-96.2415	65.21944	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-23	Yes	Caribou	16	Foraging	N/A	600	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	19	Foraging	N/A	100	129	East	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-23	Yes	Caribou	33	Walking	S	200	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	12	Walking	E	300	125	East	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	9	Lying Down	N/A	50	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	3	Walking	S	0	151	West	Yes	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	25	Foraging	W	2000	156	West	No	-96.45207	65.26222	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	9	Walking	W	0	168	East	Yes	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-23	Yes	Caribou	79	Foraging	N/A	1000	177	West	No	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-23	Yes	Caribou	51	Foraging	SW	1000	179	West	No	-96.00217	65.05112	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-24	Yes	Caribou	22	Foraging	N/A	50	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	65	Walking	SE	800	175	West	No	-96.60237	65.37726	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-24	Yes	Caribou	40	Walking	N	300	173	West	No	-96.60297	65.35972	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-24	Yes	Caribou	8	Standing	E	550	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	24	Walking	N	300	170	West	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	7	Standing	N/A	300	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	3	Trotting/running	W	500	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-04-24	Yes	Caribou	34	Standing	N/A	600	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	9	Standing	E	25	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	8	Foraging	N/A	300	146	East	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	35	Foraging	N/A	25	146	Both	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	10	Foraging	N/A	300	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	1	Walking	S	250	144	West	No	-96.38485	65.2254	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	18	Trotting/running	N	25	144	West	No	-96.37233	65.22308	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	27	Standing	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Muskox	6	Foraging	N/A	600	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	24	Foraging	N/A	100	137	West	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-24	Yes	Caribou	71	Foraging	N/A	15	136	Both	No	-96.2274	65.21308	N/A	N/A	No	Exceeded!!	Road is closed to all traffic
Road	2024-04-24	Yes	Caribou	2	Foraging	E	0	123	Both	Yes	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	15	Standing	N/A	700	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	10	Walking	S	800	134	West	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	43	Walking	S	600	136	West	No	-96.2274	65.21308	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-24	Yes	Caribou	32	Running	NE	400	140	North	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	29	Feeding	W	50	143	West	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	92	Walking	N	100	148	West	No	-96.42744	65.22048	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-24	Yes	Caribou	6	Standing	N/A	0	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	7	Walking	E	0	150	East	Yes	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-24	Yes	Caribou	92	Alert	N	400	171	West	No	-96.5686	65.352	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-24	Yes	Caribou	26	Feeding	N/A	1000	175	West	No	-96.60237	65.37726	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	37	Foraging	N/A	200	177	West	N/A	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	13	Foraging	S	50	176	East	N/A	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	48	Walking	S	800	176	West	N/A	-96.60379	65.38622	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-25	Yes	Caribou	20	Alert	N/A	200	171	West	N/A	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	6	Foraging	N/A	300	170	West	N/A	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	54	Foraging	N/A	1000	167	West	N/A	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-25	Yes	Caribou	6	Foraging	N/A	25	155	East	N/A	-96.43417	65.26761	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	6	Foraging	N/A	500	150	West	N/A	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	103	Foraging	N/A	500	146	West	N/A	-96.39801	65.22627	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-25	Yes	Caribou	46	Foraging	N/A	200	143	West	N/A	-96.35797	65.22367	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-25	Yes	Caribou	31	Walking	S	150	120	West	N/A	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-25	Yes	Caribou	171	Walking	E	800	115	West	No	-96.00905	65.07112	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-25	Yes	Caribou	22	Resting	N/A	75	163	West	No	-96.4304	65.31741	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-25	Yes	Caribou	89	Walking	NE	80	166	West	No	-96.48819	65.32529	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-25	Yes	Muskox	3	Foraging	N/A	400	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	19	Lying Down	N/A	300	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	3	Standing	N/A	150	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	55	Lying Down	N/A	200	169	West	No	-96.53703	65.34003	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-26	Yes	Caribou	19	Walking	S	150	168	West	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	7	Walking	S	500	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	29	Walking	W	300	162	West	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	21	Walking	S	400	161	West	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	94	Standing	N/A	300	160	West	No	-96.41356	65.29429	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-26	Yes	Caribou	68	Standing	N/A	300	157	West	No	-96.41584	65.27123	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-26	Yes	Caribou	250	Foraging	N/A	400	144	West	No	-96.37217	65.22302	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-26	Yes	Caribou	2	Feeding	N/A	300	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	92	Walking	SW	500	134	West	No	-96.19286	65.20481	N/A	N/A	No	Exceeded!!	Road closd
Road	2024-04-26	Yes	Caribou	34	Walking	S	600	131	West	No	-96.16073	65.18551	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	9	Walking	S	300	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	70	Trotting/running	E	1500	125	East	No	-96.10792	65.13908	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-26	Yes	Caribou	7	Feeding	N/A	150	125	East	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	15	Feeding	N/A	100	125	West	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	150	Walking	S	300	122	East	No	-96.09715	65.11477	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-26	Yes	Caribou	11	Walking	S	800	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-26	Yes	Caribou	225	Walking	S	500	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-04-26	Yes	Caribou	9	Walking	S	100	146	East	Yes	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-26	Yes	Caribou	80	Walking	S	900	152	West	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-27	Yes	Caribou	25	Foraging	N/A	300	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-27	Yes	Caribou	80	Standing	N/A	400	158	West	No	-96.40471	65.27776	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-27	Yes	Caribou	9	Feeding	N/A	100	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-27	Yes	Caribou	30	Foraging	N/A	500	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-27	Yes	Caribou	27	Walking	S	200	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-27	Yes	Caribou	27	Walking	S	100	110	East	Yes	-96.04065	65.0414	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-28	Yes	Caribou	37	Foraging	N/A	200	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-28	Yes	Caribou	21	Foraging	N/A	400	165	West	No	-96.46782	65.32389	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-28	Yes	Caribou	6	Walking	S	50	159	East	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-28	Yes	Caribou	12	Walking	SE	2500	157	East	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-28	Yes	Caribou	33	Lying Down	N/A	1000	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-04-28	Yes	Caribou	103	Walking	S	300	143	West	No	-96.35797	65.22367	N/A	N/A	No	Exceeded!!	Speed restriction Road already closed
Road	2024-04-28	Yes	Muskox	2	Foraging	N/A	200	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-28	Yes	Caribou	13	Walking	S	1000	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-29	Yes	Caribou	31	Foraging	N/A	800	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	670	Walking	E	0	113	West	Yes	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-04-30	Yes	Caribou	7	Feeding	N/A	250	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-04-30	Yes	Caribou	25	Foraging	W	1500	157	West	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-30	Yes	Caribou	68	Walking	SE	0	113	West	Yes	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-05-01	Yes	Caribou	5	Trotting/running	S	50	166	West	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	5	Standing	N/A	100	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	60	Standing	N/A	100	158	West	No	-96.40471	65.27776	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-05-01	Yes	Caribou	20	Foraging	N/A	1000	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	54	Walking	S	500	129	West	No	-96.14593	65.16902	N/A	N/A	No	Exceeded!!	Road is closed, speed reduce to escort the crew bus
Road	2024-05-01	Yes	Caribou	17	Walking	S	700	127	West	N/A	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	13	Walking	S	400	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Muskox	1	Standing	N/A	100	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	30	Walking	E	0	120	Both	Yes	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-01	Yes	Caribou	587	Walking	E	0	113	West	Yes	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-05-02	Yes	Caribou	60	Walking	W	300	178	West	No	-96.6219	65.40086	N/A	N/A	No	Exceeded!!	Road is closed, convoy for crew bus
Road	2024-05-02	Yes	Caribou	7	Walking	N	200	172	West	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-02	Yes	Caribou	16	Walking	N	300	170	West	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-02	Yes	Caribou	12	Walking	S	500	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-02	Yes	Caribou	42	Walking	N	1000	158	West	No	-96.40471	65.27776	N/A	N/A	No	Exceeded!!	Road closed, convoy for crew bus
Road	2024-05-02	Yes	Caribou	12	Standing	N/A	1500	146	West	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-02	Yes	Caribou	8	Standing	N/A	300	144	West	No	-96.38173	65.22516	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-02	Yes	Caribou	9	Walking	W	500	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-02	Yes	Caribou	10	Walking	N	2000	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Muskox	3	Foraging	N/A	80	141	East	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-02	Yes	Caribou	80	Walking	N/A	1500	115	East	No	-96.00905	65.07112	N/A	N/A	No	Exceeded!!	Road was closed
Road	2024-05-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-05-03	Yes	Caribou	12	Walking	N	800	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Arctic hare	1	Walking	E	0	140	West,East	Yes	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Caribou	15	Foraging	Not Recorded	200	130	West	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-03	Yes	Muskox	1	Foraging	Not Recorded	100	122	East	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-04	Yes	Muskox	2	Lying Down	N/A	30	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-04	Yes	Caribou	12	Foraging	N/A	800	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-04	Yes	Caribou	10	Foraging	N/A	600	134	East	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-04	Yes	Caribou	9	Walking	SW	1000	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-04	Yes	Caribou	20	Walking	SW	800	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-05	Yes	Caribou	3	Resting	Not Recorded	250	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-05	Yes	Caribou	4	Lying Down	N/A	400	154	West	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	15	Foraging	N/A	600	111	West	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	5	Foraging	N/A	600	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	8	Foraging	Not Recorded	600	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	8	Trotting/running	W	600	137	West	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	23	Foraging	N/A	1500	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-06	Yes	Caribou	6	Foraging	N/A	400	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	7	Foraging	N/A	600	177	West	No	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-06	Yes	Caribou	8	Foraging	N/A	900	136	West	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-07	Yes	Caribou	34	Walking	N	500	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-07	Yes	Caribou	3	Feeding	N	700	116	West	No	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Arctic fox	1	Standing	Not Recorded	0	111	West	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Arctic hare	1	Standing	N/A	100	113	West	No	-95.99327	65.0588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	2	Trotting/running	E	50	135	West	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	10	Feeding	N	800	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Muskox	4	Resting	N/A	50	142	East	No	-96.3371	65.22219	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-08	Yes	Caribou	7	Walking	N	300	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	6	Walking	N	300	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	20	Foraging	N/A	300	130	West	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	2	Foraging	N/A	200	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	15	Foraging	N/A	100	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	Yes	Caribou	4	Walking	N	50	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-05-09	Yes	Caribou	40	Walking	E	20	177	West	Yes	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Wthr traffic stopped in both directions Caribou crossed, behavior monitoring assessment done for 30 mins
Road	2024-05-10	Yes	Caribou	2	Foraging	N/A	500	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	4	Walking	N	2000	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Siksik	2	Standing	N/A	0	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	5	Walking	N	1000	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Caribou	2	Standing	N/A	500	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-10	Yes	Caribou	4	Walking	S	2000	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-10	Yes	Siksik	2	Courting	N	0	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-10	Yes	Caribou	5	Foraging	N/A	250	132	West	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	6	Foraging	N/A	400	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	22	Standing	N/A	500	164	West	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Caribou	16	Walking	NE	800	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Canada goose	4	Flying	N	0	144	West	No	-96.06999	65.02173	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-11	Yes	Muskox	8	Foraging	N/A	200	118	East	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Caribou	11	Walking	N	2000	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Caribou	4	Resting	N/A	150	125	East	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-11	Yes	Caribou	2	Walking	SE	1500	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Rough-legged-	1	Flying	W	0	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Caribou	2	Walking	N	1500	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Caribou	9	Foraging	W	1000	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Rough-legged-	1	Flying	W	1000	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Caribou	4	Foraging	N/A	100	137	West	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Muskox	4	Courting	N/A	400	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-12	Yes	Caribou	3	Walking	N	1000	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	6	Foraging	N/A	1800	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Rough-legged-	1	Flying	N/A	1000	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Rough-legged-	1	Flying	W	0	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	6	Walking	N	600	116	West	No	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Caribou	6	Foraging	N/A	1800	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-13	Yes	Gyrfalcon	4	Foraging	N/A	100	118	East	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	4	Foraging	N/A	75	135	East	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Muskox	4	Foraging	N/A	400	143	East	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-13	Yes	Caribou	8	Foraging	N/A	50	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Snow goose	3	Flying	W	10	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	9	Foraging	N/A	100	152	West	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	9	Walking	N	400	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	14	Foraging	N/A	350	115	West	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Muskox	9	Foraging	N/A	300	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	14	Walking	N	2000	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	15	Foraging	N/A	1200	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	5	Foraging	N/A	300	135	West	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Muskox	4	Foraging	N/A	300	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	13	Walking	S	400	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	8	Walking	E	200	177	East	No	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-14	Yes	Caribou	15	Walking	N	450	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	6	Foraging	N/A	150	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Muskox	4	Foraging	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	31	Standing	N/A	200	134	West	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	12	Foraging	N/A	300	134	West	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	7	Foraging	N/A	300	135	West	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Muskox	6	Foraging	N/A	500	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-15	Yes	Caribou	4	Resting	N/A	100	117	West	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-16	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-05-16	Yes	Falcon	2	Flying	N/A	0	151	East	Yes	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-16	Yes	Muskox	5	Feeding	N/A	50	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Caribou	4	Foraging	N/A	30	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Caribou	7	Walking	W	200	164	West	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Caribou	14	Foraging	N/A	100	161	West	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Unkown Bird	20	Flying	S	0	154	Both	Yes	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Sandhill crane	1	Standing	N/A	20	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-17	Yes	Muskox	6	Lying Down	N/A	20	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Sandhill crane	3	Standing	N/A	150	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Arctic hare	3	Resting	N/A	200	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Wolf	1	Walking	S	600	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	3	Foraging	N/A	600	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Canada goose	16	Foraging	N/A	150	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Ross Goose	25	Foraging	N/A	150	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Greater White-f	6	Foraging	N/A	150	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Sandhill crane	4	Standing	N/A	100	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Greater white-f	24	Standing	N/A	100	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Ross Goose	70	Standing	N/A	100	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	32	Foraging	N	200	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	12	Foraging	N/A	150	149	West	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	4	Foraging	N/A	200	149	West	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-18	Yes	Caribou	4	Foraging	N/A	100	175	West	No	-96.60237	65.37726	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Caribou	10	Foraging	N/A	200	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-05-18	Yes	Peregrine falco	1	Flying	W	200	151	West	No	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Sandhill crane	1	Flying	W	100	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Caribou	3	Lying Down	N/A	300	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Caribou	8	Lying Down	N/A	500	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Snow goose	8	Flying	N	100	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Arctic fox	1	Running	N	0	125	West	Yes	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-18	Yes	Caribou	10	Foraging	N/A	300	112	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	20	Foraging	N/A	200	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	43	Foraging	N/A	200	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	Road was closed. Monitored till evening and then group went away.
Road	2024-05-19	Yes	Caribou	19	Foraging	N/A	500	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	14	Walking	N	200	164	West	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	26	Walking	N	350	162	West	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	17	Walking	E	2000	166	West	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	22	Foraging	N/A	1500	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	28	Foraging	N/A	1500	179	West	No	-96.06992	65.02185	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	25	Foraging	N/A	200	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Caribou	2	Feeding	N/A	500	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-19	Yes	Muskox	2	Feeding	N/A	75	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-19	Yes	Caribou	43	Foraging	NW	200	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	Traffic was stopped for the section 118-120. Group was observed for 20 min.
Road	2024-05-20	Yes	Caribou	9	Foraging	N/A	200	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Greater white-f	15	Foraging	N/A	200	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-20	Yes	Muskox	6	Foraging	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	4	Foraging	N/A	150	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	2	Trotting/running	S	100	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Ptarmigan	1	Standing	N/A	100	152	West	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	3	Foraging	N/A	50	134	East	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-21	Yes	Caribou	16	Foraging	S	300	110	West	No	-96.04065	65.0414	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Muskox	5	Foraging	N/A	400	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Caribou	13	Foraging	N/A	100	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Caribou	12	Walking	S	400	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Caribou	8	Foraging	N/A	40	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Muskox	6	Foraging	N/A	150	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-21	Yes	Duck	3	Swimming	N/A	50	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	3	Foraging	N/A	150	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Arctic fox	1	Standing	N/A	0	157	East	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	7	Trotting/running	W	100	137	West	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Siksik	1	Standing	N/A	10	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Arctic hare	1	Resting	N/A	50	132	West	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	29	Foraging	N/A	350	131	West	No	-96.16073	65.18551	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	3	Walking	W	200	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-22	Yes	Caribou	1	Standing	N/A	300	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-22	Yes	Sandhill crane	2	Foraging	N/A	30	117	West	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-22	Yes	Sandhill crane	2	Foraging	N/A	50	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-23	Yes	Caribou	4	Foraging	N/A	300	142	West	No	-96.3371	65.22219	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-23	Yes	Peregrine falco	1	Flying	N/A	0	130	Both	Yes	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Muskox	4	Foraging	N/A	150	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	8	Foraging	N/A	300	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	8	Foraging	NE	600	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	5	Foraging	N/A	800	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	1	Foraging	SW	350	129	East	N/A	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	22	Foraging	NW	500	134	West	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	3	Foraging	N/A	400	135	East	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Caribou	7	Foraging	NE	300	136	Both	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Muskox	4	Foraging	N/A	1200	163	East	No	-96.4304	65.31741	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-24	Yes	Muskox	1	Foraging	N/A	1500	168	East	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-25	Yes	Caribou	13	Foraging	N/A	500	113	West	No	-95.99327	65.0588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	31	Feeding	N/A	20	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Canada goose	6	Flying	NW	0	167	Both	Yes	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	15	Flying	NE	0	166	Both	Yes	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	6	Resting	N/A	50	164	East	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	11	Flying	N	0	153	Both	Yes	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	83	Resting	N/A	100	140	Both	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Snow goose	4	Flying	N	100	138	East	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	7	Lying Down	N/A	300	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Caribou	1	Walking	W	0	129	East	Yes	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Sandhill crane	1	Standing	N/A	100	126	East	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-26	Yes	Muskox	1	Foraging	N/A	200	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-26	Yes	Muskox	5	Feeding	N/A	300	166	East	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	2	Foraging	N	100	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Muskox	2	Foraging	N/A	75	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-05-27	Yes	Snow goose	100	Foraging	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	1	Foraging	N/A	40	151	West	No	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	2	Foraging	N/A	100	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Muskox	1	Feeding	W	5	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-27	Yes	Caribou	3	Foraging	W	80	115	West	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Caribou	8	Standing	N/A	600	172	West	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Duck	4	Walking	S	20	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Ptarmigan	2	Standing	N/A	5	136	West	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-29	Yes	Ptarmigan	2	Standing	N/A	0	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Muskox	6	Feeding	N/A	160	168	East	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Caribou	2	Standing	Not Recorded	200	156	East	No	-96.45207	65.26222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Caribou	1	Standing	N/A	150	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Muskox	3	Lying Down	Not Recorded	100	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Caribou	13	Feeding	Not Recorded	600	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Caribou	5	Walking	N	400	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-30	Yes	Muskox	2	Standing	Not Recorded	250	112	East	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Caribou	15	Lying Down	N/A	1000	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Caribou	3	Walking	W	500	165	West	No	-96.46782	65.32389	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Caribou	2	Lying Down	N/A	500	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Caribou	3	Lying Down	N/A	300	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Muskox	3	Foraging	N/A	100	122	East	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Caribou	3	Foraging	N/A	800	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-05-31	Yes	Caribou	13	Walking	S	100	114	West	No	-96.00424	65.06679	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-01	Yes	Caribou	16	Trotting/running	E	300	113	West	Yes	-95.99327	65.0588	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-01	Yes	Muskox	2	Lying Down	N/A	300	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-01	Yes	Muskox	2	Foraging	NE	150	131	East	No	-96.16073	65.18551	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Caribou	2	Lying Down	N/A	75	131	East	No	-96.16073	65.18551	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Muskox	1	Feeding	N/A	300	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-02	Yes	Muskox	7	Lying Down	N/A	600	164	East	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Muskox	4	Resting	N/A	100	136	East	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Muskox	1	Foraging	N/A	100	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Muskox	3	Feeding	N/A	10	122	East	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Caribou	10	Resting	N/A	1000	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Muskox	1	Feeding	N/A	200	151	West	No	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Wolf	1	Walking	N	10	160	West	N/A	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Muskox	4	Lying Down	N/A	1000	161	East	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-03	Yes	Muskox	2	Lying Down	N/A	100	165	West	No	-96.46782	65.32389	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Muskox	4	Feeding	N/A	250	140	Both	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-04	Yes	Muskox	1	Resting	N/A	75	111	East	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Caribou	10	Foraging	N/A	200	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Peregrine falco	1	Flying	W	200	151	West	No	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Sandhill crane	1	Flying	W	100	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Caribou	3	Lying Down	N/A	300	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Caribou	8	Lying Down	N/A	500	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Snow goose	8	Flying	N	100	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Arctic fox	1	Running	N	0	125	West	Yes	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-05	Yes	Caribou	10	Foraging	N/A	300	112	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-06	Yes	Caribou	9	Foraging	N/A	500	177	West	No	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-08	Yes	Muskox	8	Foraging	N/A	5	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-08	Yes	Muskox	1	Foraging	N/A	50	117	West	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-08	Yes	Muskox	12	Walking	E	75	152	Both	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-10	Yes	Muskox	2	Foraging	N/A	20	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Muskox	2	Resting	N/A	300	157	West	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Muskox	2	Standing	N/A	350	136	West	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Muskox	2	Resting	N/A	100	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Caribou	2	Walking	N	500	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-11	Yes	Muskox	1	Resting	N/A	150	122	East	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-11	Yes	Muskox	1	Foraging	N/A	5	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-11	Yes	Caribou	11	Foraging	N/A	500	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-11	Yes	Muskox	16	Resting	N/A	150	140	East	No	-96.29851	65.22197	N/A	N/A	No	Exceeded!!	Speed rstriction put between 140-141
Incidental	2024-06-11	Yes	Muskox	1	Standing	N/A	300	147	East	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Muskox	1	Feeding	Not Recorded	100	126	East	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Caribou	1	Foraging	Not Recorded	250	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Muskox	1	Feeding	Not Recorded	200	121	East	N/A	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-12	Yes	Muskox	1	Foraging	Not Recorded	5	119	West	N/A	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Canada goose	8	Walking	E	5	175	East	No	-96.60237	65.37726	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Canada goose	15	Flying	E	0	171	Both	Yes	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Caribou	2	Foraging	N/A	550	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	1	Resting	N/A	25	144	East	No	-96.37113	65.22284	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	2	Resting	N/A	500	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-06-15	Yes	Muskox	2	Standing	E	25	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Sandhill crane	1	Standing	N/A	25	129	East	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Caribou	3	Foraging	N/A	300	129	West	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	1	Resting	N/A	100	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-15	Yes	Muskox	1	Feeding	S	25	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Muskox	2	Foraging	N/A	100	118	East	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Caribou	3	Resting	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-15	Yes	Peregrine falco	2	Flying	N/A	0	146	West	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	2	Feeding	N/A	50	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Caribou	19	Trotting/running	W	1000	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	2	Feeding	N/A	5	119	East	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-17	Yes	Muskox	1	Feeding	N/A	600	116	West	N/A	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-17	Yes	Muskox	40	Foraging	N/A	100	167	East	No	-96.5061	65.32837	N/A	N/A	No	Exceeded!!	Speed restriction in place
Road	2024-06-18	Yes	Arctic hare	2	Alert	N/A	5	162	East	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-18	Yes	Muskox	26	Lying Down	N/A	100	148	East	N/A	-96.42744	65.22048	N/A	N/A	No	Exceeded!!	Speed restriction.
Road	2024-06-18	Yes	Muskox	1	Lying Down	N/A	75	120	West	N/A	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	2	Foraging	N/A	500	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Seagull	5	Foraging	E	0	171	East	Yes	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	28	Foraging	N/A	50	170	East	No	-96.54979	65.34665	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between 169-171
Road	2024-06-19	Yes	Muskox	1	Foraging	N/A	100	160	East	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	1	Foraging	N/A	20	154	East	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	30	Resting	N/A	100	152	East	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	Speed restriction put between km 151-153
Road	2024-06-19	Yes	Caribou	12	Foraging	N/A	200	137	West	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	2	Foraging	N/A	50	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	1	Foraging	N/A	100	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-19	Yes	Muskox	1	Foraging	N/A	100	117	East	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Canada goose	2	Flying	NE	100	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Caribou	1	Standing	E	10	168	East	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	8	Foraging	N/A	600	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Caribou	5	Foraging	W	300	143	West	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	1	Standing	N/A	1	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-22	Yes	Muskox	1	Feeding	N/A	20	118	West	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-22	Yes	Muskox	22	Feeding	N/A	200	149	West	No	-96.44264	65.22327	N/A	N/A	No	Exceeded!!	Speed restriction placed at km 149
Road	2024-06-24	Yes	Muskox	5	Lying Down	N/A	700	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	1	Feeding	N/A	10	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	23	Foraging	N/A	300	161	East	No	-96.41207	65.30324	N/A	N/A	No	Exceeded!!	Speed restriction of 30 km/hr applied to km 160-161
Road	2024-06-24	Yes	Muskox	11	Lying Down	N/A	200	159	East	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	1	Feeding	N/A	500	154	West	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	16	Standing	N/A	5	151	West	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	Speed restriction of 10 km/hr applied at km 151
Road	2024-06-24	Yes	Muskox	3	Walking	N	50	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	8	Foraging	N/A	2	147	Both	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Canada goose	10	Feeding	N/A	300	145	East	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	1	Feeding	N/A	200	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Caribou	6	Walking	S	1000	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	2	Walking	E	2000	138	East	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	8	Foraging	N/A	300	134	East	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	34	Foraging	N/A	2500	133	East	No	-96.17538	65.19925	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-06-24	Yes	Muskox	1	Lying Down	N/A	400	126	West	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-24	Yes	Muskox	1	Walking	N	400	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-24	Yes	Caribou	10	Foraging	N/A	700	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-27	Yes	Caribou	1	Feeding	N/A	700	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-27	Yes	Muskox	1	Foraging	N/A	500	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-27	Yes	Muskox	1	Foraging	N/A	5	117	West	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-06-27	Yes	Muskox	22	Foraging	N/A	50	110	West	No	-96.04065	65.0414	N/A	N/A	No	Exceeded!!	Speed restriction of 30 km/hr applied at km 110-111
Incidental	2024-06-27	Yes	Muskox	5	Foraging	N/A	400	119	East	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	1	Foraging	N/A	50	121	West	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	2	Foraging	N/A	300	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Sandhill crane	1	Feeding	N/A	100	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	1	Feeding	N/A	100	137	East	No	-96.2415	65.21944	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-27	Yes	Muskox	35	Foraging	N/A	3000	150	East	N/A	-96.45008	65.23022	N/A	N/A	No	Exceeded!!	Due to the far distance of the group to the road, they have vert low possibility to impact the road, hence no actions were taken.
Incidental	2024-06-27	Yes	Muskox	14	Foraging	N/A	1	159	West	No	-96.40886	65.28601	N/A	N/A	No	Exceeded!!	Speed restriction of 30 km/hr applied at km 159
Road	2024-07-01	Yes	Muskox	8	Lying Down	N/A	300	152	West	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Caribou	1	Lying Down	N/A	200	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Muskox	1	Foraging	N/A	400	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Muskox	1	Foraging	N/A	200	134	West	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Muskox	1	Foraging	N/A	150	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Muskox	1	Foraging	N/A	1000	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Muskox	1	Foraging	N/A	5	116	West	No	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-01	Yes	Muskox	1	Foraging	N/A	20	115	East	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-07-04	Yes	Muskox	1	Feeding	Not Recorded	500	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-04	Yes	Muskox	4	Feeding	Not Recorded	25	166	West,East	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-04	Yes	Muskox	3	Standing	Not Recorded	200	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-04	Yes	Muskox	2	Resting	Not Recorded	100	131	West	No	-96.16073	65.18551	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-04	Yes	Muskox	2	Lying Down	Not Recorded	100	125	West	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-04	Yes	Muskox	11	Foraging	E	10	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-06	Yes	Muskox	2	Foraging	N/A	10	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-06	Yes	Muskox	3	Feeding	N/A	20	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-06	Yes	Muskox	2	Foraging	Not Recorded	20	129	West	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-06	Yes	Caribou	1	Running	E	5	130	East	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-06	Yes	Caribou	2	Lying Down	Not Recorded	50	150	West	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-06	Yes	Muskox	14	Trotting/running	W	30	159	West	No	-96.40886	65.28601	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-07-06	Yes	Muskox	1	Walking	NE	70	178	East	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-08	Yes	Muskox	23	Foraging	N/A	150	111	West	No	-96.02402	65.04815	N/A	N/A	No	Exceeded!!	Speed restriction
Incidental	2024-07-09	Yes	Muskox	4	Feeding	N/A	50	129	West	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-09	Yes	Muskox	14	Lying Down	N/A	200	115	West	No	-96.00905	65.07112	N/A	N/A	No	Exceeded!!	Speed Restriction
Road	2024-07-11	Yes	Muskox	2	Foraging	N/A	5	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	26	Foraging	N/A	400	171	West	No	-96.5686	65.352	N/A	N/A	No	Exceeded!!	Speed restriction between 170-172
Road	2024-07-11	Yes	Muskox	1	Foraging	N/A	25	116	East	No	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-11	Yes	Muskox	1	Foraging	N/A	500	115	West	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-11	Yes	Muskox	1	Foraging	N/A	10	111	East	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-11	Yes	Muskox	9	Foraging	N/A	1000	153	West	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-11	Yes	Muskox	12	Foraging	N/A	5	161	West	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-11	Yes	Arctic fox	1	Trotting/running	E	0	116	East	Yes	-96.02061	65.08026	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-13	Yes	Arctic hare	2	Standing	N/A	10	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-13	Yes	Red back vole	1	Trotting/running	S	5	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-13	Yes	Muskox	19	Foraging	N/A	300	162	West	No	-96.4168	65.31155	N/A	N/A	No	Exceeded!!	Speed restriction between 162-163
Road	2024-07-13	Yes	Muskox	2	Foraging	N/A	10	150	West	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-13	Yes	Muskox	1	Foraging	N/A	800	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-13	Yes	Muskox	2	Foraging	N/A	150	117	Both	No	-96.03942	65.0837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-13	Yes	Muskox	1	Foraging	N/A	75	115	West	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-14	Yes	Muskox	18	Lying Down	N/A	600	151	West	No	-96.46622	65.23447	N/A	N/A	No	Exceeded!!	More than 500 m from road
Road	2024-07-14	Yes	Caribou	1	Walking	S	0	127	West	N/A	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-20	Yes	Muskox	1	Feeding	N/A	100	112	East	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-20	Yes	Muskox	1	Feeding	N/A	100	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-22	Yes	Muskox	5	Foraging	S	900	126	East	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-22	Yes	Canada goose	39	Playing	N/A	200	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-22	Yes	Muskox	8	Resting	N/A	100	126	East	No	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-24	Yes	Muskox	1	Resting	N/A	350	143	East	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-24	Yes	Wolf	1	Walking	SE	50	162	East	N/A	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-27	Yes	Muskox	1	Resting	N/A	5	124	East	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-28	Yes	Muskox	12	Foraging	N/A	350	130	West	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Arctic fox	1	Trotting/running	N	0	133	East	Yes	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Siksik	2	Trotting/running	W	20	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-30	Yes	Muskox	10	Foraging	W	300	122	West	No	-96.09715	65.11477	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-30	Yes	Caribou	30	Foraging	NE	80	168	East	No	-96.52405	65.33352	N/A	N/A	No	Exceeded!!	Speed restriction applied at km 168-173
Incidental	2024-07-30	Yes	Caribou	29	Foraging	N/A	80	171	East	No	-96.5686	65.352	N/A	N/A	No	Exceeded!!	Speed restriction km 168-173
Incidental	2024-07-30	Yes	Caribou	28	Foraging	N/A	300	171	East	No	-96.5686	65.352	N/A	N/A	No	Exceeded!!	Speed restriction from km 168 to km 173
Incidental	2024-07-30	Yes	Caribou	20	Foraging	N/A	80	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-30	Yes	Caribou	8	Walking	N	1500	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-30	Yes	Caribou	75	Foraging	N/A	100	172	East	No	-96.58667	65.35504	N/A	N/A	No	Exceeded!!	Limited traffic on the road and soeed restriction of 30 km/hr applied at km 168-173
Incidental	2024-07-30	Yes	Caribou	43	Foraging	N	50	170	East	No	-96.54979	65.34665	N/A	N/A	No	Exceeded!!	Limited traffic on the road and soeed restriction of 30 km/hr applied at km 168-173
Incidental	2024-07-30	Yes	Caribou	65	Foraging	N	150	169	East	No	-96.53703	65.34003	N/A	N/A	No	Exceeded!!	Limited traffic on the road and soeed restriction of 30 km/hr applied at km 168-173
Incidental	2024-07-30	Yes	Caribou	128	Foraging	N	50	169	East	No	-96.53703	65.34003	N/A	N/A	No	Exceeded!!	Road was restricted access
Incidental	2024-07-31	Yes	Caribou	127	Foraging	N/A	350	175	East	No	-96.60237	65.37726	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-07-31	Yes	Caribou	2	Foraging	N/A	50	179	East	No	-96.66408	65.40259	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-31	Yes	Muskox	6	Foraging	N/A	600	179	West	No	-96.63935	65.40497	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-31	Yes	Caribou	250	Foraging	N	100	173	East	No	-96.60297	65.35972	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-07-31	Yes	Muskox	1	Walking	S	50	166	East	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-31	Yes	Caribou	50	Foraging	S	100	165	East	No	-96.46782	65.32389	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-07-31	Yes	Caribou	1	Walking	S	0	144	East	Yes	-96.39609	65.22607	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-31	Yes	Muskox	1	Lying Down	N/A	50	138	West	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-07-31	Yes	Sandhill crane	2	Standing	N/A	50	118	East	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Muskox	9	Foraging	N/A	150	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Muskox	1	Foraging	S	500	138	East	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Walking	N	0	143	West	Yes	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Standing	N/A	150	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Trotting/running	N	200	153	East	No	-96.47626	65.24823	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Trotting/running	E	50	154	East	No	-96.46296	65.2546	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Muskox	1	Standing	N/A	80	160	East	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-07-31	Yes	Muskox	1	Standing	N/A	2000	162	West	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Trotting/running	W	50	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Foraging	N/A	50	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	1	Standing	N/A	150	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	75	Foraging	W	2000	179	West	No	-96.00217	65.05112	N/A	N/A	No	Exceeded!!	Caribou were very far from the road
Incidental	2024-07-31	Yes	Muskox	2	Foraging	N/A	1500	164	West	No	-96.44722	65.32256	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Muskox	1	Foraging	N/A	600	162	East	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-31	Yes	Caribou	155	Foraging	W	1500	177	West	No	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-08-01	Yes	Caribou	10	Foraging	N/A	1500	179	West	No	-96.65623	65.40424	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-01	Yes	Muskox	1	Foraging	N/A	80	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-01	Yes	Muskox	13	Foraging	N/A	600	130	West	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-01	Yes	Muskox	1	Feeding	N/A	80	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-01	Yes	Caribou	45	Foraging	N/A	800	176	West	No	-96.60379	65.38622	N/A	N/A	No	Exceeded!!	Road was restricted access
Incidental	2024-08-01	Yes	Caribou	11	Resting	N/A	1500	179	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-01	Yes	Caribou	38	Foraging	N/A	600	177	West	No	-96.60847	65.39434	N/A	N/A	No	Exceeded!!	Restricted road access
Road	2024-08-02	Yes	Caribou	1	Feeding	N/A	900	179	West	No	-96.66342	65.4032	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Caribou	12	Foraging	N/A	2000	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Caribou	2	Foraging	N/A	20	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Caribou	1	Foraging	N	80	167	East	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Caribou	2	Foraging	E	200	165	East	No	-96.46782	65.32389	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-02	Yes	Muskox	1	Foraging	N/A	5	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	Speed restriction
Incidental	2024-08-02	Yes	Caribou	1	Foraging	N	100	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-02	Yes	Caribou	1	Foraging	W	900	179	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-02	Yes	Caribou	17	Foraging	SW	500	177	West	No	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	Speed restriction
Incidental	2024-08-02	Yes	Caribou	12	Foraging	NW	0	179	West	Yes	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	Speed restriction
Road	2024-08-03	Yes	Caribou	1	Foraging	N	50	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-03	Yes	Muskox	20	Lying Down	N/A	800	176	West	No	-96.60379	65.38622	N/A	N/A	No	Exceeded!!	Group further than 500 m
Road	2024-08-03	Yes	Caribou	2	Feeding	N/A	75	175	West	No	-96.60237	65.37726	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-03	Yes	Muskox	17	Foraging	W	700	172	West	No	-96.58667	65.35504	N/A	N/A	No	Exceeded!!	Group further that 500 m
Road	2024-08-03	Yes	Sandhill crane	2	Walking	N/A	5	142	West	No	-96.3371	65.22219	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-03	Yes	Caribou	1	Running	S	20	150	West	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-03	Yes	Muskox	1	Feeding	N/A	700	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-03	Yes	Caribou	3	Foraging	N/A	200	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-03	Yes	Caribou	1	Lying Down	E	0	172	East	Yes	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-03	Yes	Caribou	1	Walking	E	0	178	East	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-04	Yes	Muskox	1	Feeding	E	400	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-04	Yes	Muskox	9	Foraging	W	100	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-05	Yes	Muskox	1	Foraging	N	100	175	West	No	-96.60237	65.37726	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-05	Yes	Muskox	12	Lying Down	N/A	800	130	West	No	-96.1528	65.17815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-05	Yes	Muskox	1	Lying Down	N/A	50	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-05	Yes	Muskox	2	Foraging	S	20	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Caribou	1	Walking	W	10	179	West	No	-96.65913	65.40356	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Arctic hare	1	Standing	W	5	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Caribou	3	Feeding	N/A	50	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Caribou	1	Foraging	N	40	168	West	No	-96.52405	65.33352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-06	Yes	Muskox	12	Foraging	S	900	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Caribou	1	Running	W	0	120	Both	Yes	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Muskox	16	Foraging	N/A	200	133	East	No	-96.17538	65.19925	N/A	N/A	No	Exceeded!!	Speed restriciton km 132-133, 30 km/h
Road	2024-08-07	Yes	Caribou	1	Feeding	N/A	100	143	East	No	-96.35797	65.22367	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Peregrine falco	1	Resting	N/A	0	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Siksik	1	Dead	N/A	0	160	East	No	-96.41356	65.29429	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Caribou	2	Resting	N	0	170	East	Yes	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Siksik	1	Dead	N/A	0	127	West	No	-96.12549	65.15381	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-08-07	Yes	Arctic fox	1	Dead	N/A	0	116	West	No	-96.02061	65.08026	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-08-08	Yes	Caribou	2	Trotting/running	W	0	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-09	Yes	Caribou	1	Trotting/running	S	0	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-10	Yes	Caribou	1	Injured	N	600	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-10	Yes	Caribou	1	Walking	W	5	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-10	Yes	Sandhill crane	7	Standing	N/A	300	134	East	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-10	Yes	Canada goose	9	Standing	N/A	300	134	East	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-10	Yes	Muskox	14	Foraging	N/A	550	125	West	No	-96.10792	65.13908	N/A	N/A	No	Exceeded!!	Group further than 500 m
Incidental	2024-08-10	Yes	Caribou	1	Foraging	N/A	3	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-10	Yes	Muskox	1	Foraging	N/A	30	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-10	Yes	Caribou	1	Lying Down	N/A	250	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-10	Yes	Caribou	1	Standing	N/A	75	170	East	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-10	Yes	Muskox	7	Lying Down	N/A	75	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Caribou	1	Trotting/running	N	5	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Canada goose	31	Foraging	N/A	30	172	West	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Caribou	1	Trotting/running	W	0	169	East	Yes	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Caribou	1	Trotting/running	SE	0	151	East	Yes	-96.46622	65.23447	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-08-12	Yes	Muskox	1	Foraging	N/A	1000	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Canada goose	33	Feeding	N/A	75	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Caribou	1	Walking	E	0	129	West	Yes	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-12	Yes	Muskox	12	Lying Down	N/A	500	124	West	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-12	Yes	Caribou	3	Lying Down	W	0	177	West	No	-96.60847	65.39434	ccessful deterre	N/A	No	Not Exceeded	Speed restriction
Road	2024-08-13	Yes	Caribou	1	Feeding	N/A	50	152	East	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-13	Yes	Caribou	1	Feeding	N/A	100	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Muskox	1	Feeding	N/A	1000	127	West	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Muskox	9	Foraging	N/A	1000	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-15	Yes	Muskox	11	Foraging	N/A	1000	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-17	Yes	Caribou	1	Foraging	W	20	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-17	Yes	Arctic hare	1	Trotting/running	E	5	141	East	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-17	Yes	Arctic hare	1	Trotting/running	W	10	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-17	Yes	Arctic hare	1	Trotting/running	NE	30	150	West	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-17	Yes	Caribou	1	Feeding	N/A	30	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-17	Yes	Muskox	2	Feeding	N/A	30	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-17	Yes	Caribou	1	Walking	N	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-17	Yes	Caribou	1	Lying Down	N/A	5	144	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-18	Yes	Muskox	8	Lying Down	N/A	50	171	West	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-19	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-08-19	Yes	Caribou	1	Walking	N/A	0	135	West,East	Yes	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Caribou	1	Foraging	N/A	80	166	West	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Gyrfalcon	1	Flying	NW	90	166	West	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Caribou	2	Walking	S	0	152	Both	Yes	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Caribou	1	Walking	N	50	132	West	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-21	Yes	Caribou	1	Foraging	N	40	111	West	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-21	Yes	Muskox	3	Lying Down	N	500	128	West	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-21	Yes	Muskox	1	Walking	S	200	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-21	Yes	Caribou	1	Standing	N/A	5	161	East	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-21	Yes	Caribou	1	Foraging	S	100	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-25	Yes	Caribou	1	Walking	E	0	119	East	N/A	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-26	Yes	Muskox	1	Foraging	N/A	100	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-26	Yes	Caribou	8	Foraging	N/A	250	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Standing	Not Recorded	250	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Trotting/running	W	0	134	Both	Yes	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Walking	N	100	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Lying Down	Not Recorded	100	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Feeding	S	200	150	West	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Feeding	Not Recorded	100	167	West	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-27	Yes	Caribou	1	Standing	Not Recorded	100	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Muskox	6	Foraging	N/A	200	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Muskox	1	Lying Down	N/A	70	136	West	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Walking	S	60	115	West	No	-96.00905	65.07112	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-30	Yes	Muskox	4	Feeding	N/A	200	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Caribou	4	Walking	N	200	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Caribou	3	Foraging	N/A	300	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Muskox	1	Lying Down	N/A	70	134	West	No	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-31	Yes	Muskox	16	Foraging	N/A	10	127	West	No	-96.12549	65.15381	N/A	N/A	No	Exceeded!!	Speed restriction put in place between 126-128
Road	2024-08-31	Yes	Muskox	5	Lying Down	N/A	300	127	Both	No	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Muskox	1	Walking	W	600	133	West	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Caribou	1	Walking	E	0	147	Both	Yes	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Caribou	1	Foraging	W	5	149	West	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Muskox	23	Resting	N/A	300	154	East	No	-96.46296	65.2546	N/A	N/A	No	Exceeded!!	Speed restriction was put in place between 153-155
Road	2024-08-31	Yes	Caribou	3	Trotting/running	S	0	170	West	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Caribou	1	Standing	N/A	100	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Road	2024-08-31	Yes	Muskox	8	Foraging	W	0	172	Both	Yes	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-02	Yes	Muskox	13	Standing	N/A	0	124	East	No	-96.10808	65.13155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-04	Yes	Muskox	1	Walking	N	100	145	East	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Canada goose	7	Flying	W	5	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	2	Foraging	N/A	150	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	2	Foraging	N	75	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-05	Yes	Caribou	3	Standing	N/A	100	175	Both	No	-96.60237	65.37726	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-06	Yes	Caribou	2	Walking	N	25	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-06	Yes	Caribou	1	Walking	E	25	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-06	Yes	Caribou	2	Feeding	N/A	130	150	East	N/A	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-07	Yes	Caribou	2	Walking	N	25	176	West	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-07	Yes	Caribou	1	Walking	E	25	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-12	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-09-12	Yes	Caribou	2	Foraging	N	25	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-09-14	Yes	Caribou	3	Feeding	Not Recorded	40	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-21	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-23	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-09-23	Yes	Muskox	6	Foraging	E	1	167	West,East	Yes	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-23	Yes	Muskox	28	Walking	E	25	156	East	Yes	-96.45207	65.26222	N/A	N/A	No	Exceeded!!	Speed restrition was put in place 30 km/h no becons
Incidental	2024-09-23	Yes	Muskox	1	Foraging	N/A	20	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-24	Yes	Peregrine falco	2	Flying	NE	20	138	East	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-24	Yes	Muskox	36	Foraging	N/A	800	152	East	No	-96.47617	65.24176	N/A	N/A	No	Exceeded!!	No speed restriction due to their distance away from the road amd the road already being closed
Road	2024-09-24	Yes	Muskox	4	Foraging	NE	20	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-28	Yes	Caribou	8	Foraging	N/A	250	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-28	Yes	Muskox	8	Standing	N/A	50	161	East	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-09-28	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-09-29	Yes	Muskox	2	Feeding	E	300	145	East	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-30	Yes	Muskox	22	Feeding	N/A	1000	128	West	No	-96.13583	65.16137	N/A	N/A	No	Exceeded!!	Group further than 500 m
Incidental	2024-09-30	Yes	Muskox	6	Feeding	N/A	100	166	East	No	-96.48819	65.32529	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-01	Yes	Ptarmigan	4	Resting	N/A	25	120	East	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-02	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-10-03	Yes	Caribou	1	Walking	N	0	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-03	Yes	Rough-legged-	1	Flying	S	0	152	Both	Yes	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-03	Yes	Muskox	27	Foraging	N/A	2000	134	West	No	-96.19286	65.20481	N/A	N/A	No	Exceeded!!	Road is already closed and group is far away from the road
Road	2024-10-05	Yes	Muskox	7	Foraging	N/A	20	167	East	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-10-07	Yes	Caribou	3	Walking	W	200	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-08	Yes	Caribou	51	Walking	NE	250	139	East	Yes	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-09	Yes	Muskox	26	Walking	NW	100	135	West	No	-96.20801	65.2089	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-10-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-10-11	Yes	Muskox	2	Lying Down	N/A	300	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	2	Foraging	N/A	400	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Caribou	58	Foraging	N/A	150	146	East	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	1	Foraging	N/A	300	145	West	No	-96.3769	65.22422	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-11	Yes	Muskox	25	Foraging	N/A	300	137	East	No	-96.2415	65.21944	N/A	N/A	No	Exceeded!!	Spped restriction km 137
Road	2024-10-13	Yes	Muskox	3	Foraging	N/A	1500	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-13	Yes	Muskox	2	Lying Down	N/A	50	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-13	Yes	Muskox	2	Foraging	N/A	275	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Caribou	18	Walking	N	200	167	East	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Muskox	2	Feeding	N/A	15	159	East	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Muskox	2	Feeding	N/A	148	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Muskox	2	Feeding	N/A	30	120	West	No	-96.0728	65.10021	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Caribou	67	Feeding	W	300	111	West	No	-96.02402	65.04815	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Caribou	31	Resting	N/A	500	139	East	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Caribou	9	Walking	S	900	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-14	Yes	Wolf	1	Walking	S	100	149	East	No	-96.44264	65.22327	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-15	Yes	Muskox	2	Feeding	N/A	100	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-17	Yes	Muskox	9	Feeding	N/A	500	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-19	Yes	Muskox	2	Foraging	Not Recorded	20	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-19	Yes	Muskox	2	Walking	S	125	119	West	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-19	Yes	Caribou	1	Walking	S	210	146	West	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-19	Yes	Muskox	2	Feeding	N/A	240	147	West	No	-96.41835	65.22786	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-21	Yes	Muskox	2	Walking	E	200	138	East	No	-96.26018	65.2238	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-23	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-10-25	Yes	Muskox	2	Feeding	Not Recorded	500	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-25	Yes	Muskox	12	Lying Down	N/A	600	159	West	No	-96.40886	65.28601	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-27	Yes	Muskox	2	Feeding	Not Recorded	400	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-29	Yes	Muskox	3	Foraging	N/A	200	157	East	N/A	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-29	Yes	Muskox	7	Foraging	N/A	300	156	West	N/A	-96.45207	65.26222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-29	Yes	Muskox	3	Foraging	N/A	500	140	West	N/A	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-10-29	Yes	Muskox	23	Feeding	Not Recorded	50	138	East	No	-96.26018	65.2238	N/A	N/A	No	Exceeded!!	Spped restriction of 30 km/h placed
Incidental	2024-10-29	Yes	Muskox	3	Lying Down	Not Recorded	100	158	East	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Wolf	8	Running	N	500	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-10-31	Yes	Muskox	25	Feeding	Not Recorded	25	138	East	No	-96.26018	65.2238	N/A	N/A	No	Exceeded!!	Speed restriction
Road	2024-11-01	Yes	Muskox	19	Foraging	N/A	400	119	West	No	-96.06476	65.09321	N/A	N/A	No	Exceeded!!	Speed restriction between km 118-120
Incidental	2024-11-02	Yes	Caribou	12	Foraging	N/A	200	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-02	Yes	Caribou	1	Resting	N/A	200	167	East	No	-96.5061	65.32837	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-11-05	Yes	Muskox	1	Foraging	N/A	50	109	West	No	-96.04183	65.04047	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-11-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-11-14	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-11-16	Yes	Wolverine	1	Dead	N/A	0	135	North	N/A	-96.20801	65.2089	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-11-17	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-11-19	Yes	Muskox	1	Foraging	N/A	50	157	East	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-19	Yes	Caribou	18	Foraging	N/A	500	127	East	N/A	-96.12549	65.15381	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-21	Yes	Arctic hare	1	Dead	N/A	0	127	West	No	-96.12549	65.15381	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-11-21	Yes	Muskox	4	Foraging	N/A	600	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-23	Yes	Muskox	5	Lying Down	N/A	100	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-23	Yes	Arctic fox	1	Trotting/running	W	1	126	North	Yes	-96.11084	65.14818	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-24	Yes	Caribou	17	Feeding	Not Recorded	700	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-25	Yes	Muskox	4	Feeding	N/A	20	157	East	No	-96.41584	65.27123	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Arctic fox	1	Dead	N/A	0	164	West	N/A	-96.44722	65.32256	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Muskox	17	Foraging	N/A	1500	159	West	No	-96.40886	65.28601	N/A	N/A	No	Exceeded!!	None, group far enough from the road
Road	2024-11-26	Yes	Muskox	4	Foraging	N/A	1000	142	West	No	-96.3371	65.22219	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Caribou	60	Walking	N	1500	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Caribou	4	Walking	N	2000	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Caribou	7	Foraging	N/A	1000	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Caribou	56	Walking	N	1000	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Muskox	6	Foraging	N/A	300	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-26	Yes	Caribou	112	Foraging	N/A	2000	113	East	No	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	No measure needed, group far enough from the road
Incidental	2024-11-26	Yes	Caribou	69	Walking	N	300	123	East	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-26	Yes	Wolf	6	Trotting/running	N	500	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-27	Yes	Muskox	6	Feeding	N/A	150	119	East	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-27	Yes	Caribou	275	Feeding	W	600	147	East	No	-96.41835	65.22786	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-27	Yes	Caribou	128	Walking	NW	300	175	East	No	-96.60237	65.37726	N/A	N/A	No	Exceeded!!	Road closed
Incidental	2024-11-27	Yes	Caribou	700	Foraging	N/A	1000	174	East	No	-96.60128	65.36832	N/A	N/A	No	Exceeded!!	Closure of the road
Incidental	2024-11-27	Yes	Caribou	39	Walking	N	1000	171	East	No	-96.5686	65.352	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	97	Walking	N	400	176	East	No	-96.60379	65.38622	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-11-28	Yes	Caribou	12	Walking	N	350	174	East	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	180	Standing	N	75	173	East	No	-96.60297	65.35972	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-11-28	Yes	Caribou	51	Walking	N	700	172	East	No	-96.58667	65.35504	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	12	Walking	N	110	170	East	No	-96.54979	65.34665	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	20	Walking	N	200	169	East	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	950	Standing	N/A	500	166	West	No	-96.48819	65.32529	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-28	Yes	Caribou	14	Standing	N/A	600	163	West	No	-96.4304	65.31741	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	38	Walking	N	120	162	East	No	-96.4168	65.31155	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Muskox	7	Feeding	N/A	40	158	East	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Muskox	16	Feeding	N/A	1500	157	West	No	-96.41584	65.27123	N/A	N/A	No	Exceeded!!	Road already closed
Road	2024-11-28	Yes	Caribou	14	Standing	N/A	40	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Muskox	6	Foraging	N/A	700	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	4	Walking	W	500	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-28	Yes	Caribou	148	Foraging	N/A	500	132	East	No	-96.16457	65.194	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-11-28	Yes	Caribou	19	Walking	N	700	133	East	No	-96.17538	65.19925	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-28	Yes	Caribou	13	Walking	N	1000	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-28	Yes	Caribou	4	Walking	N	400	160	East	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	230	Resting	N/A	75	170	East	No	-96.54979	65.34665	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-29	Yes	Caribou	3	Walking	E	0	174	Both	Yes	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	51	Walking	N	100	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	69	Walking	N	50	169	West	No	-96.53703	65.34003	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	8	Walking	N	160	165	West	No	-96.46782	65.32389	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Muskox	5	Feeding	N/A	40	161	West	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Muskox	13	Standing	N/A	450	158	West	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	4	Feeding	N/A	100	156	East	No	-96.45207	65.26222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	225	Standing	N/A	150	149	East	No	-96.44264	65.22327	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-29	Yes	Caribou	48	Feeding	N/A	300	146	East	No	-96.39801	65.22627	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	215	Feeding	N/A	400	144	East	No	-96.38755	65.22559	N/A	N/A	No	Exceeded!!	Road closed
Road	2024-11-29	Yes	Muskox	3	Feeding	N/A	75	141	West	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	5	Standing	N/A	500	135	East	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	11	Walking	E	600	129	East	No	-96.14593	65.16902	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-29	Yes	Caribou	49	Feeding	N/A	700	112	East	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	2	Walking	S	150	178	West	No	-96.6219	65.40086	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	7	Walking	S	1000	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Muskox	4	Foraging	N/A	400	161	West	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	1	Walking	N	400	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	2	Foraging	N/A	1000	160	East	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Muskox	16	Foraging	N/A	0	158	East	No	-96.40471	65.27776	N/A	N/A	No	Exceeded!!	Road is closed due to migration
Road	2024-11-30	Yes	Caribou	30	Walking	N	1000	152	East	No	-96.47617	65.24176	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	45	Foraging	N/A	100	148	East	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	130	Trotting/running	N	1300	143	East	No	-96.35797	65.22367	N/A	N/A	No	Exceeded!!	Road is closed
Road	2024-11-30	Yes	Muskox	4	Foraging	N/A	100	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-11-30	Yes	Caribou	400	Resting	N/A	900	113	East	No	-95.99327	65.0588	N/A	N/A	No	Exceeded!!	Road is closed
Incidental	2024-11-30	Yes	Caribou	400	Lying Down	N/A	900	112	East	No	-96.00217	65.05112	N/A	N/A	No	Exceeded!!	Road is closed due to migration
Road	2024-12-01	Yes	Caribou	25	Walking	N	150	177	East	No	-96.60847	65.39434	N/A	N/A	No	Not Exceeded	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Road	2024-12-01	Yes	Caribou	5	Walking	N	500	176	East	No	-96.60379	65.38622	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Caribou	4	Walking	N	400	174	West	No	-96.60128	65.36832	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Muskox	5	Feeding	N	50	161	West	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Muskox	4	Feeding	N	25	139	West	No	-96.27997	65.22686	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Caribou	2	Feeding	N	50	136	East	No	-96.2274	65.21308	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-01	Yes	Caribou	38	Feeding	N	1500	125	East	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-01	Yes	Muskox	2	Lying Down	N/A	500	121	East	No	-96.08638	65.10712	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-01	Yes	Common raven	1	Flying	S	200	123	West	No	-96.10441	65.12217	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-01	Yes	Caribou	69	Running	NE	500	173	East	No	-96.60297	65.35972	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-02	Yes	Muskox	5	Resting	N/A	250	160	West	No	-96.41356	65.29429	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-03	Yes	Arctic fox	1	Walking	W	0	118	West	No	-96.05506	65.08648	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-03	Yes	Common raven	3	Flying	S	0	119	East	No	-96.06476	65.09321	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-03	Yes	Arctic fox	1	Foraging	N/A	5	132	East	No	-96.16457	65.194	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-03	Yes	Caribou	68	Walking	W	600	150	East	No	-96.45008	65.23022	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-04	Yes	Muskox	4	Feeding	N/A	500	140	West	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-05	Yes	Muskox	15	Feeding	N/A	50	156	West	No	-96.45207	65.26222	N/A	N/A	No	Exceeded!!	Speed rest km 156
Road	2024-12-05	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-12-06	Yes	Muskox	15	Foraging	N/A	1500	158	West	N/A	-96.40471	65.27776	N/A	N/A	No	Exceeded!!	>500 m no mitigation measure needed
Road	2024-12-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-12-09	Yes	Muskox	6	Feeding	N/A	2000	158	West	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-09	Yes	Caribou	10	Lying Down	N/A	1500	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-12-11	Yes	Muskox	2	Lying Down	Not Recorded	500	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Caribou	9	Feeding	Not Recorded	500	141	East	No	-96.31809	65.22368	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-11	Yes	Muskox	4	Lying Down	Not Recorded	300	161	East	No	-96.41207	65.30324	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-13	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-12-13	Yes	Caribou	2	Feeding	N/A	400	135	East	No	-96.20801	65.2089	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-15	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-12-17	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-12-17	Yes	Caribou	4	Feeding	Not Recorded	300	144	West	No	-96.00217	65.05112	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-21	Yes	Muskox	36	Alert	W	500	141	West	No	-96.31809	65.22368	N/A	N/A	No	Exceeded!!	Speed restricton in place
Incidental	2024-12-23	Yes	Caribou	11	Feeding	N/A	800	140	East	No	-96.29851	65.22197	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-23	Yes	Muskox	16	Resting	N/A	2000	155	West	N/A	-96.43417	65.26761	N/A	N/A	No	Exceeded!!	No mitigation - group was more than 1.5 km away
Incidental	2024-12-24	Yes	Arctic fox	1	Dead	Not Recorded	0	168	West	No	-96.52405	65.33352	N/A	Project relate	No	Not Exceeded	N/A
Road	2024-12-27	Yes	Muskox	5	Standing	N/A	800	156	West	No	-96.45207	65.26222	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-29	Yes	Ptarmigan	12	Flying	E	0	158	East	No	-96.40471	65.27776	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-29	Yes	Muskox	6	Standing	N/A	700	155	West	No	-96.43417	65.26761	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-29	Yes	Common raven	2	Flying	N/A	0	148	West	No	-96.42744	65.22048	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-29	Yes	Common raven	1	Flying	N/A	0	128	East	No	-96.13583	65.16137	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-30	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Road	2024-12-31	Yes	Common raven	1	Flying	N	0	134	East	Yes	-96.19286	65.20481	N/A	N/A	No	Not Exceeded	N/A
Road	2024-12-31	Yes	Common raven	2	Standing	N/A	0	125	West	No	-96.10792	65.13908	N/A	N/A	No	Not Exceeded	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-01 9:25	Yes	Caribou	23	Walking	N	1200	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-01-01 9:25	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-01 9:25	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-01 9:25	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-01 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-03 1:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-05 10:24	Yes	Arctic fox	1	Running	SO	0	156	East		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-01-05 10:24	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-05 10:24	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-05 10:24	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-05 10:24	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-07 8:45	Yes	Muskox	7	Feeding	N/A	800	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-01-07 8:45	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-07 8:45	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-07 8:45	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-07 8:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-11 12:57	Yes	Muskox	7	Resting	N/A	50	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-01-11 12:57	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-11 12:57	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-11 12:57	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-11 12:57	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-16 9:41	Yes	Muskox	7	Feeding	Not Recorded	1500	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-01-16 9:41	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-16 9:41	Yes	Muskox	15	Feeding	Not Recorded	300	121-122	West		-96.08638	65.10712				Exceeded	Speed restriction
Viewshed	2024-01-16 9:41	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-16 9:41	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-16 9:41	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-16 9:41	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-16 9:41	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-16 9:41	Yes	Caribou	8	Foraging	N/A	700	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-01-16 9:41	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-16 9:41	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-16 9:41	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-16 9:41	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-19 9:20	Yes	Muskox	2	Foraging	N/A	1500	160-161	East		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-01-19 9:20	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-19 9:20	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-19 9:20	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-19 9:20	Yes	Muskox	9	Foraging	N/A	3000	169	East		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-01-19 9:20	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-19 9:20	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-19 9:20	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-19 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-21 9:15	Yes	Caribou	2	Feeding	N/A	1000	166	East		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-01-21 9:15	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-21 9:15	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-21 9:15	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-21 9:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-23 9:20	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-25 12:18	Yes	Caribou	4	Feeding	N/A	75	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-01-25 12:18	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-25 12:18	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-25 12:18	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-25 12:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-01-31 12:07	Yes	Muskox	2	Standing	N/A	375	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-01-31 12:07	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-31 12:07	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-31 12:07	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-01-31 12:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-06 8:53	Yes	Muskox	7	Standing	N/A	2500	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-02-06 8:53	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-06 8:53	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-06 8:53	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-06 8:53	Yes	Muskox	15	Foraging	N/A	100	144	East		-96.35797	65.22367				Exceeded	Speed restriction
Viewshed	2024-02-06 8:53	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-06 8:53	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-06 8:53	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-06 8:53	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-15 10:50	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-15 10:50	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-15 10:50	Yes	Muskox	27	Foraging	Not Recorded	150	144	West		-96.35797	65.22367				Exceeded	Speed restriction
Viewshed	2024-02-15 10:50	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-15 10:50	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-20 1:16	Yes	Muskox	48	Foraging	N/A	600	154	East		-96.46296	65.2546				Exceeded	Group further than 500 m
Viewshed	2024-02-20 1:16	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-20 1:16	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-20 1:16	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-20 1:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-02-25 1:13	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-25 1:13	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-25 1:13	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-25 1:13	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-02-25 1:13	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-25 1:13	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-25 1:13	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-25 1:13	Yes	Muskox	4	Foraging	N/A	15	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-02-25 1:13	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-02-25 1:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-07 7:01	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-07 7:01	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-07 7:01	Yes	Muskox	10	Resting	N/A	1500	118	West		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-03-07 7:01	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-07 7:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-17 12:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	Muskox	2	Standing	N/A	3000	128	East		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	Muskox	20	Standing	N/A	2000	144	East		-96.35797	65.22367				Exceeded	Group further than 500 m
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	Muskox	2	Standing	N/A	2000	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-23 8:42	Yes	Muskox	2	Standing	N/A	600	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-03-23 8:42	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-23 8:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-03-31 8:21	Yes	Muskox	42	Foraging	N/A	1800	144	East		-96.35797	65.22367				Exceeded	Group further than 500 m
Viewshed	2024-03-31 8:21	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-31 8:21	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-31 8:21	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-03-31 8:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-05 8:25	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-05 8:25	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-05 8:25	Yes	Caribou	20	Walking	S	500	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-04-05 8:25	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-05 8:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-07 10:22	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-07 10:22	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-07 10:22	Yes	Muskox	12	Feeding	N/A	3000	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-04-07 10:22	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-07 10:22	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-07 10:22	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	Caribou	77	Walking	N	100	118	West		-96.05506	65.08648				Exceeded	Road closed
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	Muskox	7	Feeding	N/A	40	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-04-09 12:59	Yes	Wolverine	1	Trotting/running	S	50	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	Caribou	11	Feeding	N/A	250	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-09 12:59	Yes	Caribou	16	Alert	N/A	300	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-04-09 12:59	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-09 12:59	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-09 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	Caribou	150	Foraging	N/A	1000	166	West		-96.48819	65.32529				Exceeded	Road closed
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	Caribou	14	Alert	N	500	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-21 7:53	Yes	Caribou	3	Walking	E	200	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-04-21 7:53	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	98	Walking	O	350	128	West		-96.13583	65.16137				Exceeded	Road closed
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	103	Walking	O	500	133	West		-96.17538	65.19925				Exceeded	Road closed
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	19	Resting	N/A	250	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-23 6:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	75	Walking	O	1500	154	West		-96.46296	65.2546				Exceeded	Road closed
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	125	Foraging	N/A	350	156	West		-96.45207	65.26222				Exceeded	Road closed
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	75	Walking	O	500	160-161	West		-96.41356	65.29429				Exceeded	Road closed
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	35	Walking	O	1250	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	36	Walking	O	2000	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-23 6:46	Yes	Caribou	9	Walking	O	1500	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-04-23 6:46	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	Ptarmigan	3	Standing	Not Recorded	2	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	Caribou	5	Walking	N/A	0	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	Caribou	85	Lying Down	N/A	120	144	West		-96.35797	65.22367				Exceeded	Road closed
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	Caribou	25	Foraging	N/A	3000	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-28 6:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-04-28 6:18	Yes	Caribou	20	Foraging	N/A	2800	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-04-28 6:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-02 3:20	Yes	Caribou	17	Walking	S	2500	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-02 3:20	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-02 3:20	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-02 3:20	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-02 3:20	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-02 3:20	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-02 3:20	Yes	Caribou	30	Walking	S	1000	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-05-02 3:20	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-02 3:20	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-02 3:20	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	Muskox	2	Foraging	Not Recorded	30	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	Caribou	9	Foraging	N/A	30	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	Caribou	17	Foraging	N/A	3000	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	Caribou	23	Walking	S	2500	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-04 2:40	Yes	Caribou	29	Foraging	S	2000	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-04 2:40	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-04 2:40	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	Caribou	7	Lying Down	N/A	3000	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-07 9:18	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-07 9:18	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-07 9:18	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-07 9:18	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-07 9:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	Muskox	4	Standing	N/A	3000	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-07 9:18	Yes	Caribou	12	Walking	E	3000	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-07 9:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-10 9:05	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-10 9:05	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-10 9:05	Yes	Caribou	4	Walking	S	2000	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-10 9:05	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-10 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	Caribou	2	Walking	N	1500	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	Caribou	2	Walking	N	1500	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	Rough-legged-	1	Flying	N/A	1000	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-12 7:51	Yes	Caribou	9	Foraging	N/A	1000	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-12 7:51	Yes	Caribou	6	Foraging	N	1000	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-05-12 7:51	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-12 7:51	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	Caribou	6	Walking	N	600	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	Rough-legged-	1	Flying	O	0	118	West		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	Rough-legged-	1	Flying	O	0	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-13 12:15	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	Caribou	6	Foraging	N/A	1800	176	East		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-13 12:15	Yes	Snow goose	1	Flying	E	0	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-13 12:15	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	Muskox	9	Foraging	N/A	300	118	East		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	Caribou	14	Walking	N	2000	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-14 1:11	Yes	Caribou	15	Foraging	N/A	1200	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-14 1:11	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-14 1:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-15 10:15	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-15 10:15	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-15 10:15	Yes	Muskox	5	Foraging	O	600	118	West		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-05-15 10:15	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-15 10:15	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-15 10:15	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-15 10:15	Yes	Caribou	6	Foraging	N/A	150	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-05-15 10:15	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-15 10:15	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-16 2:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-17 9:02	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	Sandhill crane	3	Standing	N/A	150	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	Wolf	1	Walking	S	600	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	Caribou	3	Foraging	N/A	600	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-18 7:26	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-18 7:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	Muskox	2	Foraging	N/A	400	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	2	Walking	N	1200	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	7	Foraging	N/A	1500	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	12	Foraging	N/A	500	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	11	Resting	N/A	400	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	1	Foraging	N/A	200	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	17	Walking	E	2000	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-19 2:26	Yes	Caribou	22	Foraging	E	1500	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-05-19 2:26	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-19 2:26	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-20 2:09	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-20 2:09	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-20 2:09	Yes	Sandhill crane	2	Resting	N/A	300	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-05-20 2:09	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-20 2:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-21 9:21	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-21 9:21	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-21 9:21	Yes	Caribou	10	Walking	N	1800	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-21 9:21	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-21 9:21	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	Caribou	3	Walking	O	200	128	East		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	Arctic hare	1	Standing	Not Recorded	100	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	Ptarmigan	2	Standing	Not Recorded	0	166	East		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-22 8:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-22 8:24	Yes	Caribou	3	Foraging	N/A	150	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-22 8:24	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	Caribou	6	Resting	N/A	2000	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-05-23 8:36	Yes	Caribou	1	Standing	N/A	1800	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	Muskox	5	Lying Down	N/A	150	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	Canada goose	30	Flying	E	0	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-23 8:36	Yes	Sandhill crane	7	Resting	N/A	100	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-05-23 8:36	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-23 8:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Common raven	1	Flying	N	100	118	East		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Muskox	4	Foraging	N/A	200	118	East		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Ptarmigan	5	Flying	N	300	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-24 2:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Caribou	5	Resting	N/A	600	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	11	Flying	NE	0	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Ptarmigan	3	Foraging	Not Recorded	300	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Arctic hare	2	Standing	Not Recorded	200	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	56	Flying	NE	300	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	210	Flying	N	100	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Sandhill crane	1	Flying	N	200	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	86	Flying	N	400	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Ptarmigan	2	Standing	Not Recorded	300	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	30	Flying	N	0	160-161	East		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	58	Flying	E	0	166	East		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	2	Foraging	N/A	300	166	East		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Siksik	2	Alert	Not Recorded	200	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	20	Flying	E	400	169	East		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-24 2:18	Yes	Snow goose	102	Flying	N	600	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-24 2:18	Yes	Ptarmigan	1	Foraging	N/A	100	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	Caribou	8	Walking	SE	120	118	West		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	Caribou	3	Walking	N	390	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	Caribou	7	Lying Down	Not Recorded	380	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	Muskox	5	Foraging	Not Recorded	120	166	East		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-29 10:06	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-29 10:06	Yes	Caribou	11	Foraging	Not Recorded	130	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-05-29 10:06	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	Caribou	4	Walking	SO	250	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-05-31 12:38	Yes	Caribou	9	Lying Down	Not Recorded	1800	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	Muskox	2	Foraging	N/A	90	156	East		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	Muskox	3	Foraging	Not Recorded	1300	166	East		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-31 12:38	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-05-31 12:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	Caribou	1	Feeding	N/A	100	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	Caribou	2	Lying Down	N/A	1500	118	West		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	Caribou	4	Alert	O	50	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-04 8:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-04 8:36	Yes	Muskox	2	Feeding	N/A	200	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	Caribou	12	Resting	O	1000	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	Muskox	2	Feeding	N/A	200	176	East		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	Caribou	12	Resting	N/A	1000	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-06-04 8:36	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	Muskox	8	Foraging	N/A	200	116	East		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	Rough-legged-	1	Flying	NE	50	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	Caribou	11	Walking	N	2000	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	Caribou	2	Walking	SE	1500	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	Canada goose	4	Feeding	N/A	50	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-06 9:30	Yes	Caribou	16	Walking	NE	800	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-06-06 9:30	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-06 9:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-08 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	Muskox	1	Resting	Not Recorded	25	118	East		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	Caribou	3	Foraging	Not Recorded	400	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	Muskox	28	Foraging	Not Recorded	2000	166	East		-96.48819	65.32529				Exceeded	Group further than 500m
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-15 12:29	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-15 12:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Muskox	42	Foraging	N/A	300	133	East		-96.17538	65.19925				Exceeded	Speed Restriction
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Muskox	2	Walking	E	2000	138	East		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Caribou	6	Walking	S	1000	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Muskox	7	Foraging	N/A	2	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Muskox	1	Feeding	N/A	500	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Muskox	35	Feeding	N/A	300	160-161	East		-96.41356	65.29429				Exceeded	Speed Restriction
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-24 9:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-06-24 9:24	Yes	Muskox	5	Lying Down	N/A	700	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-06-24 9:24	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	Wolf	1	Walking	S	500	128	East		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	Muskox	2	Feeding	N/A	0	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-01 8:29	Yes	Muskox	1	Feeding	Not Recorded	800	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-07-01 8:29	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-01 8:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-06 1:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-13 1:37	Yes	Muskox	1	Walking	E	200	128	East		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-07-13 1:37	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-13 1:37	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-13 1:37	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-13 1:37	Yes	Muskox	1	Standing	Not Recorded	300	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-07-13 1:37	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-13 1:37	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-13 1:37	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-13 1:37	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:30	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-20 7:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	Muskox	10	Foraging	O	300	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	Siksik	2	Trotting/running	O	20	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	Arctic fox	1	Trotting/running	N	0	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-30 7:00	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-07-30 7:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	Caribou	1	Foraging	E	20	128	East		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	Caribou	1	Walking	S	0	166	West		-96.48819	65.32529				Not Exceeded	Traffic was stopped until the caribou walked to the tundra
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	Caribou	1	Walking	N	0	169	East		-96.53703	65.34003				Not Exceeded	Speed restriction
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-06 12:59	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-06 12:59	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-17 10:01	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-17 10:01	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-17 10:01	Yes	Caribou	1	Walking	NE	1000	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-08-17 10:01	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-17 10:01	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	Muskox	5	Foraging	N/A	650	171	East		-96.00217	65.05112				Not Exceeded	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.00217	65.05112				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-24 7:30	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.00217	65.05112				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	Muskox	23	Foraging	N/A	500	154	East		-96.46296	65.2546				Exceeded	Speed restriction
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	Muskox	1	Walking	S	1000	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-31 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-08-31 9:03	Yes	Snow goose	27	Walking	N/A	400	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-08-31 9:03	Yes	Caribou	3	Foraging	Not Recorded	300	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Snow goose	17	Flying	SE	250	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Snow goose	117	Standing	N/A	150	118	West		-96.05506	65.08648				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Snow goose	43	Standing	N/A	40	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Snow goose	84	Standing	N/A	100	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Snow goose	72	Standing	N/A	100	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Snow goose	8	Foraging	N/A	300	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-14 11:56	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Caribou	4	Walking	NE	400	169	West		-96.53703	65.34003				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-14 11:56	Yes	Caribou	3	Walking	S	750	176	West		-96.60379	65.38622				Not Exceeded	N/A
Viewshed	2024-09-14 11:56	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-21 7:35	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-23 9:52	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-25 10:00	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-25 10:00	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-25 10:00	Yes	Muskox	1	Foraging	O	400	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-09-25 10:00	Yes	Snow goose	70	Foraging	Not Recorded	500	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-25 10:00	Yes	Gyrfalcon	1	Alert	E	150	160-161	East		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-09-25 10:00	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-25 10:00	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-25 10:00	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-25 10:00	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-09-28 7:07	Yes	Muskox	27	Foraging	N/A	800	160-161	East		-96.41356	65.29429				Exceeded	Group further than 500 m
Viewshed	2024-09-28 7:07	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-28 7:07	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-28 7:07	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-09-28 7:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	Siksik	1	Running	E	50	121-122	East		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	Common raven	2	Flying	NO	1000	128	West		-96.13583	65.16137				Not Exceeded	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	Muskox	17	Foraging	N/A	2000	166	East		-96.48819	65.32529				Exceeded	Group further than 500 m
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-01 10:36	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-01 10:36	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-03 10:07	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-03 10:07	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-05 11:11	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-07 2:24	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-07 2:24	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-07 2:24	Yes	Caribou	14	Walking	O	3000	166	West		-96.48819	65.32529				Not Exceeded	N/A
Viewshed	2024-10-07 2:24	Yes	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-07 2:24	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-07 2:24	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-09 12:44	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-09 12:44	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-09 12:44	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-09 12:44	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-09 12:44	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-11 8:34	Yes	Caribou	7	Standing	N/A	100	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-10-11 8:34	Yes	Caribou	8	Foraging	N/A	2000	144	East		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-10-11 8:34	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-11 8:34	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-11 8:34	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-11 8:34	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-11 8:34	Yes	Muskox	2	Lying Down	N/A	300	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-10-11 8:34	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-11 8:34	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-13 9:25	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-15 8:46	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-15 8:46	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-15 8:46	Yes	Muskox	6	Feeding	N/A	1500	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-10-15 8:46	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-15 8:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-17 8:11	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-17 8:11	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-19 8:39	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-19 8:39	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-19 8:39	Yes	Muskox	10	Walking	S	1	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-10-19 8:39	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-19 8:39	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-23 9:38	Yes	Muskox	18	Lying Down	Not Recorded	400	169	East		-96.53703	65.34003				Exceeded	Speed restriction
Viewshed	2024-10-23 9:38	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-23 9:38	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-23 9:38	Yes	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-23 9:38	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-25 9:13	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-25 9:13	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-25 9:13	Yes	Ptarmigan	2	Flying	N	100	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-10-25 9:13	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-25 9:13	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-27 2:23	N/A	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-10-27 2:23	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-27 2:23	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-10-27 2:23	Yes	Muskox	10	Feeding	Not Recorded	500	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-10-27 2:23	Yes	Muskox	2	Feeding	Not Recorded	300	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-10-27 2:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-05 10:46	Yes	Muskox	20	Walking	O	0	138	East		-96.26018	65.2238				Exceeded	Speed restriction
Viewshed	2024-11-05 10:46	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-05 10:46	Yes	Muskox	3	Foraging	N/A	25	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-11-05 10:46	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-05 10:46	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-07 8:18	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-10 9:49	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-10 9:49	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-10 9:49	Yes	Common raven	1	Resting	N/A	0	133	West		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-11-10 9:49	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-10 9:49	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-10 9:49	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-10 9:49	Yes	Muskox	28	Lying Down	N/A	2000	138	West		-96.26018	65.2238				Exceeded	Group further than 500 m
Viewshed	2024-11-10 9:49	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-10 9:49	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-12 10:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-14 11:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-19 10:43	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-21 9:45	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-21 9:45	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-21 9:45	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-21 9:45	Yes	Muskox	1	Walking	SE	2000	144	West		-96.35797	65.22367				Not Exceeded	N/A
Viewshed	2024-11-21 9:45	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-21 9:45	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-21 9:45	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-21 9:45	Yes	Common raven	2	Flying	S	5	154	West		-96.46296	65.2546				Not Exceeded	N/A
Viewshed	2024-11-21 9:45	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-21 9:45	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-23 7:29	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-23 7:29	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-23 7:29	Yes	Muskox	3	Feeding	N/A	2000	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-11-23 7:29	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-23 7:29	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	Caribou	200	Walking	NO	2000	128	West		-96.13583	65.16137				Exceeded	Road closed
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	Muskox	4	Lying Down	N/A	200	156	East		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-27 11:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	Caribou	142	Walking	N	700	176	East		-96.60379	65.38622				Exceeded	Road closed
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-27 11:16	Yes	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-30 2:56	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-11-30 2:56	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	Caribou	11	Walking	N	2000	133	East		-96.17538	65.19925				Not Exceeded	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	Muskox	2	Lying Down	N	175	138	West		-96.26018	65.2238				Not Exceeded	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	Caribou	31	Walking	N	150	160-161	East		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-01 6:42	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-01 6:42	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-02 6:31	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-02 6:31	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-02 6:31	Yes	Muskox	5	Resting	N/A	250	160-161	West		-96.41356	65.29429				Not Exceeded	N/A
Viewshed	2024-12-02 6:31	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-02 6:31	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-03 9:17	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-03 9:17	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-03 9:17	Yes	Muskox	14	Foraging	N/A	1000	156	West		-96.45207	65.26222				Exceeded	Group further than 500 m
Viewshed	2024-12-03 9:17	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-03 9:17	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-05 9:05	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	Caribou	19	Foraging	N/A	3500	116	West		-96.02061	65.08026				Not Exceeded	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	Caribou	45	Walking	NO	2500	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-06 9:14	Yes	Muskox	15	Foraging	N/A	1000	160-161	West		-96.41356	65.29429				Exceeded	Group further than 500 m
Viewshed	2024-12-06 9:14	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-06 9:14	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-07 8:58	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-09 9:16	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-09 9:16	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-09 9:16	Yes	Muskox	2	Standing	N/A	3000	121-122	West		-96.08638	65.10712				Not Exceeded	N/A
Viewshed	2024-12-09 9:16	Yes	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-09 9:16	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-09 9:16	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-09 9:16	Yes	Muskox	14	Feeding	N/A	3000	160-161	West		-96.41356	65.29429				Exceeded	Group further than 500 m
Viewshed	2024-12-09 9:16	Yes	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-09 9:16	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-11 9:03	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-11 9:03	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-11 9:03	Yes	Muskox	6	Feeding	N/A	2500	156	West		-96.45207	65.26222				Not Exceeded	N/A
Viewshed	2024-12-11 9:03	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-11 9:03	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-13 9:23	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-13 9:23	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-13 9:23	Yes	Muskox	35	Resting	N/A	2000	144	West		-96.35797	65.22367				Exceeded	Group further than 500 m
Viewshed	2024-12-13 9:23	Yes	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-13 9:23	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-15 2:15	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-15 2:15	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-17 1:14	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-17 1:14	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-17 1:14	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-17 1:14	N/A	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-23 12:09	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-23 12:09	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-23 12:09	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-23 12:09	Yes	Muskox	16	Resting	N/A	2000	154	West		-96.46296	65.2546				Exceeded	Group further than 500 m
Viewshed	2024-12-23 12:09	Yes	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-23 12:09	No	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	116	N/A		-96.02061	65.08026				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	118	N/A		-96.05506	65.08648				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	121-122	N/A		-96.08638	65.10712				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A

Table A-2: Wildlife Observations along the Whale Tail Haul Road in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	128	N/A		-96.13583	65.16137				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	133	N/A		-96.17538	65.19925				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	138	N/A		-96.26018	65.2238				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	144	N/A		-96.35797	65.22367				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	154	N/A		-96.46296	65.2546				N/A	N/A
Viewshed	2024-12-31 12:22	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-31 12:22	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-31 12:22	Yes	Muskox	16	Standing	N/A	1100	156	West		-96.45207	65.26222				Exceeded	Group further than 500 m
Viewshed	2024-12-31 12:22	Yes	-	N/A	N/A	N/A	N/A	156	N/A		-96.45207	65.26222				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	160-161	N/A		-96.41356	65.29429				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	166	N/A		-96.48819	65.32529				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-31 12:22	No	-	N/A	N/A	N/A	N/A	169	N/A		-96.53703	65.34003				N/A	N/A
Viewshed	2024-12-31 12:22	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-31 12:22	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-31 12:22	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A
Viewshed	2024-12-31 12:22	N/A	-	N/A	N/A	N/A	N/A	176	N/A		-96.60379	65.38622				N/A	N/A

Table A-3: Wildlife Observations at Meadowbank Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-01-01	Yes	Wolverine	1	Walking	E	N/A	N/A	East	N/A	-96.06972	65.01167	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-01-14	Yes	Common raven	10	Standing	N/A	10	N/A	North	No	-96.05444	65.03333	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-01-14	Yes	Common raven	2	Standing	N/A	10	N/A	South	No	-96.06111	65.03111	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-01-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-01-19	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-01-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-02-14	Yes	Wolverine	1	Walking	N/A	0	N/A	East	No	-96.0675	65.01611	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-02-17	Yes	Common raven	19	Standing	N/A	500	N/A	North	N/A	-96.05444	65.03333	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-02-24	Yes	Common raven	36	Resting	N/A	0	N/A	West	No	-96.05444	65.03333	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-01	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-18	Yes	Arctic hare	1	Trotting/running	S	30	N/A	West	No	-96.06972	65.01167	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-18	Yes	Arctic fox	1	Walking	S	75	N/A	West	No	-96.04833	65.01083	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-23	Yes	Arctic fox	1	Running	S	0	N/A	South	Yes	-96.0675	65.01611	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-23	Yes	Arctic fox	1	Walking	W	300	N/A	East	No	-96.05444	65.03333	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-23	Yes	Arctic fox	3	Running	W	100	N/A	West	No	-96.07667	65.03917	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-23	Yes	Common raven	16	Resting	N/A	150	N/A	West	No	-96.07667	65.03917	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-23	Yes	Arctic hare	1	Foraging	N/A	200	N/A	East	No	-96.00361	65.075	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-06	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-04-14	Yes	Arctic fox	2	Walking	N/A	100	N/A	South	No	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-14	Yes	Arctic hare	2	Resting	SW	100	N/A	South	No	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-14	Yes	Caribou	7	Foraging	SW	500	N/A	South	No	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Wolverine	2	Running	SW	N/A	N/A	South	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Caribou	14	Foraging	N/A	N/A	N/A	West	N/A	-96.08139	65.01833	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-04-16	Yes	Caribou	8	Foraging	W	N/A	N/A	South	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-20	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-04-27	Yes	Caribou	6	Walking	E	1	N/A	West	Yes	-96.0725	65.025	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-05-04	Yes	Arctic fox	1	Trotting/running	N	0	N/A	North	Yes	-96.07	65.02139	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Caribou	8	Foraging	N/A	N/A	N/A	West	N/A	-96.0675	65.01611	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-05-25	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-08	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-08	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-06-11	Yes	Caribou	6	Foraging	W	N/A	N/A	East	N/A	-96.0725	65.025	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-06-13	Yes	Arctic fox	4	Playing	W	N/A	N/A	N/A	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-14	Yes	Muskox	1	Foraging	N/A	N/A	N/A	East	N/A	-96.07	65.02	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-14	Yes	Caribou	5	Foraging	W	N/A	N/A	East	N/A	-96.0725	65.025	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-06-20	Yes	Arctic fox	6	Playing	N/A	N/A	N/A	West	N/A	-96.07	65.02139	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Muskox	1	Foraging	N/A	50	N/A	West	No	-96.10111	65.04639	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Muskox	1	Foraging	N/A	200	N/A	West	No	-96.05167	65.04167	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Arctic fox	7	Lying Down	Not Recorded	1	N/A	East,West	Yes	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Canada goose	6	Flying	S	800	N/A	N/A	No	-96.04972	65.01472	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Canada goose	7	Resting	N/A	400	N/A	North	No	-96.04972	65.01472	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Arctic fox	1	Trotting/running	N/A	0	N/A	N/A	Yes	-96.07	65.02139	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Seagull	1	Flying	NE	80	N/A	N/A	No	-96.07	65.02139	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-22	Yes	Arctic fox	4	Walking	N/A	0	N/A	N/A	Yes	-96.07	65.02139	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-26	Yes	Caribou	6	Lying Down	N/A	N/A	N/A	East	N/A	-95.9717	64.32525	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-12	Yes	Arctic fox	1	Standing	N/A	0	N/A	East	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-12	Yes	Muskox	2	Foraging	N/A	0	N/A	West	No	-96.07	65.02	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-12	Yes	Siksik	1	Running	E	0	N/A	East	No	-96.08139	65.01833	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-18	Yes	American Robin	1	Nesting	N/A	N/A	N/A	North	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-09	Yes	Caribou	1	Walking	E	0	N/A	East	Yes	-96.04833	65.01083	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-09	Yes	Siksik	1	Running	W	0	N/A	West	Yes	-96.05167	65.04167	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-09	Yes	Canada goose	4	Foraging	N/A	50	N/A	West	No	-96.08139	65.01833	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-23	Yes	Caribou	1	Walking	SW	N/A	N/A	North	N/A	-96.05167	65.04167	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-09-06	Yes	Black Scoter	6	Dead	N/A	N/A	N/A	South	N/A	-96.07	65.02	N/A	Project related	No	Not Exceeded	N/A
Mine & Pit	2024-09-21	Yes	Muskox	2	Feeding	Not Recorded	50	N/A	East	No	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-09-23	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-09-26	Yes	Duck	1	Injured	N/A	N/A	N/A	N/A	N/A	-96.07	65.02	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-09-29	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-01	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-3: Wildlife Observations at Meadowbank Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Mine & Pit	2024-10-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-15	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-17	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-19	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-21	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-31	Yes	Common Raven	7	Standing	N/A	0	N/A	West	No	-96.05444	65.03333	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-05	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-08	Yes	Arctic hare	2	Walking	N/A	5	N/A	West	No	-96.06972	65.01167	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-12	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-14	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-11-15	Yes	Wolverine	1	Running	N	N/A	N/A	East	N/A	-96.0725	65.025	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-16	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-20	Yes	Arctic hare	3	Alert	N/A	1000	N/A	East	No	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-22	Yes	Wolf	1	Walking	E	N/A	N/A	East	N/A	-96.0445	65.04178	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-22	Yes	Wolf	1	Walking	E	500	N/A	East	No	-96.0445	65.04178	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-27	Yes	Arctic fox	1	Walking	E	100	N/A	East	No	-96.0675	65.01611	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-28	Yes	Wolf	1	Walking	S	N/A	N/A	East	N/A	-96.00361	65.075	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-30	Yes	Wolverine	1	Walking	W	N/A	N/A	West	N/A	-96.0445	65.04178	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-02	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-06	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-07	Yes	Common Raven	15	Standing	N/A	30	N/A	West	No	-96.06111	65.03111	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-12-10	Yes	Wolf	1	Foraging	NE	N/A	N/A	West	N/A	-96.05444	65.03333	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-12	Yes	Muskox	5	Feeding	Not Recorded	800	N/A	East	No	-96.00361	65.075	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-12	Yes	Arctic fox	1	Running	W	N/A	N/A	West	N/A	-96.07	65.02139	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-14	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-12-15	Yes	Wolf	1	Resting	Not Recorded	N/A	N/A	East	N/A	-96.05444	65.03333	Deterrents did not succeed	N/A	No	Not Exceeded	N/A
Incidental	2024-12-15	Yes	Wolf	1	Walking	S	N/A	N/A	North	N/A	-96.0525	65.0275	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-12-15	Yes	Wolf	1	Walking	N	N/A	N/A	West	N/A	-96.06111	65.03111	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-12-16	Yes	Wolf	1	Trotting/running	W	N/A	N/A	North	N/A	-96.06111	65.03111	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-16	Yes	Wolf	2	Resting	W	20	N/A	West	No	-96.06111	65.03111	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-12-17	Yes	Wolf	1	Walking	SW	N/A	N/A	West	N/A	-96.05778	65.03278	Deterrents did not succeed	N/A	No	Not Exceeded	N/A
Incidental	2024-12-19	Yes	Caribou	10	Resting	Not Recorded	N/A	N/A	West,East	N/A	-96.08139	65.01833	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-20	Yes	Wolverine	1	Running	N	1000	N/A	East	No	-96.0445	65.04178	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-12-22	Yes	Wolverine	1	Standing	Not Recorded	N/A	N/A	North	N/A	-96.05444	65.03333	Deterrents did not succeed	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-22	Yes	Common raven	5	Feeding	N/A	25	N/A	East	No	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-22	Yes	Arctic fox	1	Alert	N/A	0	N/A	West	No	-96.05778	65.03278	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-26	Yes	Arctic fox	1	Walking	N/A	1	N/A	West	N/A	-96.0725	65.025	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-26	Yes	Arctic fox	1	Walking	NE	0	N/A	East	Yes	-96.0675	65.01611	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-27	Yes	Wolverine	1	Feeding	W	100	N/A	West	N/A	-96.0445	65.04178	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-30	Yes	Wolverine	1	Lying Down	W	500	N/A	West	N/A	-96.06111	65.03111	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-30	Yes	Arctic fox	2	Walking	N/A	200	N/A	North	N/A	-96.05444	65.03333	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-30	Yes	Caribou	2	Walking	N/A	N/A	N/A	South	N/A	-96.0445	65.04178	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-02-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-3: Wildlife Observations at Meadowbank Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Mine & Pit	2024-02-11	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-30	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-05-11	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-05-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-02	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-28	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-07-06	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-07-19	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-07-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-08-02	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-21	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-25	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-05	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-13	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-23	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-25	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-04	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-25	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-28	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-30	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Mine & Pit	2024-01-06	Yes	Arctic fox	1	Walking	N	0	N/A	East	No	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-01-13	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental	2024-01-19	Yes	Wolf	1	Walking	N	N/A	N/A	East	N/A	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-01-20	Yes	Arctic fox	1	Trotting/running	S	0	N/A	East	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-01-27	Yes	Arctic fox	1	Walking	S	0	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-02-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-02-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-02-17	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-02-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-02	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-16	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-03-23	Yes	Arctic fox	1	Trotting/running	S	0	N/A	East	No	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-03-30	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-04-06	Yes	Arctic fox	1	Trotting/running	S	0	N/A	North	Yes	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-13	Yes	Common raven	4	Flying	N	0	N/A	East	No	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-20	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-04-28	Yes	Grizzly bear	1	Walking	N	20	N/A	North	Yes	-96.73344	65.39528	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-29	Yes	Caribou	2	Standing	S	10	N/A	East	No	-96.74699	65.38479	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-04-29	Yes	Caribou	5	Feeding	N/A	500	N/A	North	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-05-09	Yes	Arctic fox	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-05-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-08	Yes	Caribou	8	Resting	Not Recorded	750	N/A	South	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-06-14	Yes	Grizzly bear	1	Walking	N	N/A	N/A	East	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-15	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-22	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-06-29	Yes	Muskox	1	Foraging	S	1	N/A	South	No	-96.67316	65.4062	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-06-29	Yes	Muskox	2	Lying Down	N/A	200	N/A	North	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-05	Yes	Caribou	2	Trotting/running	N	N/A	N/A	South	N/A	-96.69148	65.41467	Successful deterrence	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-06	Yes	Muskox	1	Walking	S	75	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-13	Yes	Muskox	1	Foraging	N/A	100	N/A	East	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-13	Yes	Arctic fox	1	Running	N	10	N/A	East	No	-96.68938	65.40226	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-16	Yes	Caribou	2	Standing	N/A	N/A	N/A	West	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-17	Yes	Caribou	3	Walking	SW	N/A	N/A	East	N/A	-96.68632	65.40507	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-17	Yes	Caribou	1	Walking	N	N/A	N/A	East	N/A	-96.66921	65.41191	N/A	N/A	Yes - Seen this caribou leave other males 10 mins previous to this	Not Exceeded	N/A
Incidental	2024-07-17	Yes	Caribou	1	Standing	N/A	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-17	Yes	Caribou	1	Standing	N/A	N/A	N/A	East	N/A	-96.69148	65.41467	N/A	N/A	Yes - Same direction single male travelled earlier today	Not Exceeded	N/A
Incidental	2024-07-17	Yes	Caribou	1	Trotting/running	SW	N/A	N/A	West	N/A	-96.68938	65.40226	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-17	Yes	Passerine bird	2	Nesting	N/A	N/A	N/A	East	N/A	-96.67243	65.39951	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-18	Yes	Caribou	1	Running	NE	N/A	N/A	East	N/A	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-18	Yes	Caribou	1	Resting	N/A	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-20	Yes	Arctic fox	2	Feeding	N/A	0	N/A	East	Yes	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-20	Yes	Caribou	2	Walking	NW	0	N/A	East	Yes	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-20	Yes	Seagull	1	Flying	N	10	N/A	West	Yes	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-20	Yes	Caribou	1	Walking	NW	0	N/A	West	Yes	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-20	Yes	Passerine bird	1	Nesting	N/A	0	N/A	East	N/A	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-20	Yes	Caribou	1	Walking	SW	N/A	N/A	East	N/A	-96.7023	65.40391	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-20	Yes	Seagull	5	Feeding	N/A	N/A	N/A	East	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-20	Yes	Muskox	10	Foraging	S	N/A	N/A	East	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-21	Yes	Muskox	18	Foraging	N/A	N/A	N/A	South	N/A	-96.6973	65.40372	N/A	N/A	No	Exceeded!!	Due to the far distance of the muskox group from the mine. Hence, no mitigation actions were taken.
Incidental	2024-07-21	Yes	Caribou	1	Running	NE	N/A	N/A	East	N/A	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-21	Yes	Caribou	1	Resting	N/A	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-21	Yes	Caribou	1	Lying Down	N/A	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-21	Yes	Caribou	1	Walking	SE	N/A	N/A	South	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Incidental	2024-07-21	Yes	Golden eagle	1	Flying	NW	N/A	N/A	West	N/A	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-21	Yes	Caribou	1	Walking	NW	N/A	N/A	West	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-22	Yes	Caribou	1	Trotting/running	W	N/A	N/A	N/A	N/A	-96.67316	65.4062	N/A	N/A	Yes - See previous days	Not Exceeded	N/A
Incidental	2024-07-22	Yes	Caribou	1	Trotting/running	SW	N/A	N/A	West	N/A	-96.72792	65.40934	N/A	N/A	Yes - Same caribou seen previously	Not Exceeded	N/A
Incidental	2024-07-22	Yes	Caribou	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.68632	65.40507	N/A	N/A	Yes - Seen several times in previous days	Not Exceeded	N/A
Incidental	2024-07-23	Yes	Caribou	1	Milling	NW	N/A	N/A	North	N/A	-96.68632	65.40507	Successful deterrence	N/A	Yes - Same caribou seen yesterday	Not Exceeded	N/A
Incidental	2024-07-26	Yes	Caribou	1	Trotting/running	NE	N/A	N/A	North	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-07-28	Yes	Caribou	1	Foraging	E	200	N/A	East	No	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-29	Yes	Caribou	1	Walking	N/A	N/A	N/A	North	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-07-29	Yes	Caribou	1	Running	N	N/A	N/A	North	N/A	-96.72792	65.40934	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-07-29	Yes	Caribou	1	Injured	N/A	N/A	N/A	South	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-01	Yes	Caribou	1	Standing	N/A	N/A	N/A	East	N/A	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-03	Yes	Caribou	1	Walking	N	0	N/A	West	Yes	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-10	Yes	Peregrine falcon	1	Flying	N/A	200	N/A	East	No	-96.69026	65.41185	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	1	Standing	N/A	N/A	N/A	East	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	4	Lying Down	N/A	N/A	N/A	East	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	1	Trotting/running	N	N/A	N/A	East	N/A	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	1	Trotting/running	W	N/A	N/A	West	N/A	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	1	Walking	W	N/A	N/A	West	N/A	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	11	Walking	N	N/A	N/A	West	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	1	Injured	S	N/A	N/A	West	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	3	Foraging	N/A	N/A	N/A	South	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-11	Yes	Caribou	1	Foraging	N/A	N/A	N/A	West	N/A	-96.68795	65.40847	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-12	Yes	Caribou	1	Foraging	N/A	250	N/A	West	No	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-12	Yes	Caribou	1	Lying Down	N/A	5	N/A	West	No	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-12	Yes	Caribou	2	Walking	N	0	N/A	East,West	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-12	Yes	Caribou	3	Walking	N	0	N/A	East,West	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-12	Yes	Caribou	1	Trotting/running	W	300	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-12	Yes	Caribou	3	Lying Down	N/A	0	N/A	East	No	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-13	Yes	Caribou	1	Lying Down	N/A	N/A	N/A	North	N/A	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-13	Yes	Caribou	5	Lying Down	N/A	N/A	N/A	East	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-13	Yes	Caribou	1	Foraging	N/A	N/A	N/A	East	N/A	-96.67316	65.4062	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	2	Walking	NW	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Walking	N	N/A	N/A	N/A	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Trotting/running	N	N/A	N/A	East	N/A	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Walking	W	N/A	N/A	West	N/A	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	2	Lying Down	Not Recorded	N/A	N/A	East	N/A	-96.68938	65.40226	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Walking	N	N/A	N/A	East	N/A	-96.70824	65.40748	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Standing	Not Recorded	N/A	N/A	East	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Walking	N/A	N/A	N/A	East	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Feeding	N/A	N/A	N/A	West	N/A	-96.68938	65.40226	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	3	Standing	N/A	N/A	N/A	East	N/A	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	3	Walking	W	N/A	N/A	East	N/A	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Standing	SW	N/A	N/A	East	N/A	-96.67311	65.40088	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-16	Yes	Caribou	1	Lying Down	Not Recorded	N/A	N/A	West	N/A	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	2	Foraging	N/A	20	N/A	South	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	1	Running	NE	0	N/A	East	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	2	Walking	E	0	N/A	East	N/A	-96.67702	65.39954	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	2	Walking	SE	0	N/A	East	Yes	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	1	Walking	N/A	40	N/A	West	No	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	1	Walking	W	30	N/A	West	No	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	3	Trotting/running	N	0	N/A	North	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	5	Standing	N/A	0	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	1	Lying Down	N/A	0	N/A	South	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-17	Yes	Caribou	2	Foraging	N/A	0	N/A	East	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-17	Yes	Caribou	1	Lying Down	N/A	N/A	N/A	North	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Mine & Pit	2024-08-18	Yes	Caribou	1	Feeding	N/A	20	N/A	North	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	1	Standing	N/A	100	N/A	South	No	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	1	Feeding	N/A	60	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	2	Walking	E	10	N/A	West	Yes	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	1	Foraging	W	100	N/A	South	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	1	Standing	N/A	40	N/A	East	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	7	Walking	E	0	N/A	East	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-18	Yes	Caribou	1	Standing	N/A	15	N/A	South	No	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	2	Walking	S	100	N/A	West	No	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	6	Walking	N	0	N/A	North	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	5	Standing	N/A	0	N/A	West	Yes	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	1	Standing	N/A	20	N/A	West	No	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	2	Standing	N/A	10	N/A	South	No	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	1	Feeding	N/A	100	N/A	North	No	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-19	Yes	Caribou	1	Standing	N/A	15	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-20	Yes	Caribou	1	Walking	E	0	N/A	East	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-20	Yes	Caribou	1	Foraging	N/A	250	N/A	East	No	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-20	Yes	Caribou	1	Standing	N/A	10	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	3	Standing	N/A	0	N/A	East	No	-96.66921	65.41191	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	7	Walking	N	0	N/A	West	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	1	Alert	N/A	15	N/A	East	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	1	Walking	E	0	N/A	North	Yes	-96.74699	65.38479	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	1	Walking	N	0	N/A	South	No	-96.67702	65.39954	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	1	Foraging	E	50	N/A	South	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	1	Walking	N/A	10	N/A	South	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-21	Yes	Caribou	1	Standing	N/A	5	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-22	Yes	Sandhill crane	2	Foraging	E	10	N/A	North	No	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-22	Yes	Caribou	1	Lying Down	N/A	30	N/A	North	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-22	Yes	Caribou	1	Lying Down	N/A	60	N/A	East	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-23	Yes	Caribou	1	Walking	N	0	N/A	South	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-23	Yes	Caribou	7	Walking	N	0	N/A	South	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-23	Yes	Caribou	3	Walking	E	20	N/A	East	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-23	Yes	Caribou	1	Standing	N/A	60	N/A	West	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-23	Yes	Caribou	1	Foraging	E	150	N/A	South	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-23	Yes	Caribou	1	Walking	E	10	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	2	Standing	N/A	N/A	N/A	West	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Standing	N/A	N/A	N/A	North	N/A	-96.70527	65.40389	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	2	Standing	N/A	N/A	N/A	East	N/A	-96.72792	65.40934	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Walking	S	N/A	N/A	South	N/A	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	2	Lying Down	N/A	N/A	N/A	North	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Walking	NW	N/A	N/A	West	N/A	-96.70527	65.40389	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	2	Trotting/running	W	N/A	N/A	West	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	2	Foraging	N	N/A	N/A	North	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Trotting/running	NE	N/A	N/A	East	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Walking	W	N/A	N/A	West	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	1	Walking	W	N/A	N/A	North	N/A	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	3	Foraging	N/A	N/A	N/A	North	N/A	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-27	Yes	Caribou	4	Foraging	N/A	N/A	N/A	East	N/A	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	4	Walking	S	N/A	N/A	West	N/A	-96.67243	65.39951	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	1	Standing	Not Recorded	N/A	N/A	West	N/A	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	2	Foraging	W	N/A	N/A	East	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	5	Trotting/running	W	N/A	N/A	West	N/A	-96.69148	65.41467	Successful deterrence	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	2	Walking	N	N/A	N/A	North	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	2	Foraging	N	N/A	N/A	North	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	1	Standing	Not Recorded	N/A	N/A	South	N/A	-96.68938	65.40226	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Gyrfalcon	2	Alert	Not Recorded	N/A	N/A	North	N/A	-96.69148	65.41467	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-28	Yes	Caribou	3	Foraging	N/A	N/A	N/A	West	N/A	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-29	Yes	Caribou	2	Lying Down	Not Recorded	N/A	N/A	North	N/A	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-08-30	Yes	Caribou	1	Standing	Not Recorded	N/A	N/A	East	N/A	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	1	Trotting/running	N	10	N/A	East	No	-96.68875	65.41692	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	1	Trotting/running	N	0	N/A	East,West	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	2	Trotting/running	S	0	N/A	East,West	Yes	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	2	Standing	N/A	0	N/A	West	No	-96.66098	65.41699	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	1	Standing	W	0	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	1	Walking	W	0	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	1	Walking	S	0	N/A	West	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Mine & Pit	2024-08-31	Yes	Canada goose	28	Standing	N/A	50	N/A	East	No	-96.73344	65.39528	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	2	Walking	S	0	N/A	East	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Gyrfalcon	1	Flying	N	0	N/A	East	Yes	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	2	Walking	S	0	N/A	East,West	Yes	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-08-31	Yes	Caribou	1	Walking	W	0	N/A	East,West	Yes	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	1	Walking	S	N/A	N/A	South	N/A	-96.68617	65.39569	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	2	Standing	N/A	N/A	N/A	East	N/A	-96.67316	65.4062	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	3	Resting	N/A	N/A	N/A	West	N/A	-96.69026	65.41185	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-09-01	Yes	Caribou	3	Resting	N/A	N/A	N/A	East	N/A	-96.68938	65.40226	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-09-08	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-16	Yes	Snow goose	36	Flying	SW	40	N/A	West	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-09-16	Yes	Snow goose	16	Flying	SE	150	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-09-28	Yes	Arctic fox	1	Trotting/running	W	0	N/A	East,West	Yes	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-10-03	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-05	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-11	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-14	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-17	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-24	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-25	Yes	Arctic hare	1	Feeding	Not Recorded	30	N/A	West	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-10-28	Yes	Muskox	20	Feeding	Not Recorded	2000	N/A	West	No	-96.68617	65.39569	N/A	N/A	No	Exceeded!!	None, outside of 1km
Mine & Pit	2024-11-01	Yes	Arctic fox	1	Trotting/running	N	0	N/A	West	Yes	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-04	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-05	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-10	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-14	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-15	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-21	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-23	Yes	Arctic fox	1	Foraging	N	0	N/A	South	Yes	-96.67311	65.40088	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-24	Yes	Arctic fox	1	Trotting/running	Not Recorded	N/A	N/A	East	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-25	Yes	Arctic fox	1	Foraging	Not Recorded	N/A	N/A	East	N/A	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-25	Yes	Arctic fox	1	Alert	E	100	N/A	East	No	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-11-26	Yes	Arctic fox	1	Foraging	Not Recorded	N/A	N/A	North	N/A	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-27	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-11-29	Yes	Caribou	27	Walking	N	700	176	West	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-11-30	Yes	Arctic fox	1	Walking	E	0	N/A	West	Yes	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-01	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-03	Yes	Arctic fox	1	Walking	NE	0	N/A	South	Yes	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-05	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-07	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-09	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-11	Yes	Arctic fox	1	Alert	Not Recorded	10	N/A	East	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-13	Yes	Arctic fox	1	Standing	N/A	10	N/A	East	No	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-13	Yes	Arctic fox	1	Alert	N/A	250	N/A	North	No	-96.72792	65.40934	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-14	Yes	Wolverine	1	Running	NW	N/A	N/A	North	N/A	-96.67316	65.4062	N/A	N/A	No	Not Exceeded	N/A
Incidental	2024-12-15	Yes	Arctic fox	1	Dead	N/A	N/A	N/A	South	N/A	-96.7023	65.40391	N/A	related	No	Not Exceeded	N/A
Mine & Pit	2024-12-16	Yes	Arctic fox	1	Trotting/running	N	0	N/A	North	No	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-17	Yes	Arctic fox	1	Trotting/running	S	0	N/A	East	No	-96.67243	65.39951	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-19	Yes	Common raven	1	Foraging	S	0	N/A	South	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-20	Yes	Arctic fox	1	Running	N	0	N/A	East	No	-96.67243	65.39951	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-21	Yes	Arctic fox	1	Trotting/running	N	0	N/A	South	Yes	-96.67702	65.39954	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-21	Yes	Arctic fox	1	Foraging	N/A	0	N/A	North	No	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-23	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-12-26	Yes	Arctic fox	1	Walking	N	0	N/A	East	Yes	-96.67915	65.40624	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-26	Yes	Arctic fox	1	Walking	E	0	N/A	East	Yes	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-28	Yes	Common raven	1	Resting	N/A	60	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-28	Yes	Arctic fox	1	Trotting/running	N	75	N/A	West	No	-96.67311	65.40088	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-28	Yes	Arctic fox	1	Trotting/running	E	5	N/A	West	Yes	-96.70527	65.40389	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-12-28	Yes	Arctic fox	1	Standing	N/A	40	N/A	West	No	-96.6973	65.40372	N/A	N/A	No	Not Exceeded	N/A
Mine & Pit	2024-05-11	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-05-18	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-23	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-09-25	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-13	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mine & Pit	2024-10-19	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Pre-Blast	2024-01-01 15:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-02 17:14	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-03 15:44	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-05 16:58	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-06 16:48	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-11 15:54	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-12 15:27	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-16 15:45	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-14 15:21	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-17 14:36	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-24 15:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-25 15:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-26 15:04	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-29 15:43	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-01-31 14:45	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-02 16:52	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-03 16:19	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-04 15:46	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-09 16:08	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-10 17:31	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-12 15:39	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-13 15:03	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-14 16:23	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-15 17:48	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-16 15:47	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-17 15:45	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-18 16:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-23 16:23	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-24 16:24	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-02-28 16:33	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-01 16:35	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-02 16:14	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-03 15:39	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-04 4:31	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-06 16:24	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-07 16:38	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-09 16:40	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-12 16:24	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-14 15:01	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-13 15:23	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-16 15:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-20 16:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-22 16:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-23 16:09	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-24 15:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-25 15:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-28 17:14	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-03-30 11:27	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-01 16:05	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-03 16:14	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-06 16:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-07 16:18	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-08 16:37	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-09 17:17	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-10 16:48	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-11 17:20	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-12 15:37	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-13 14:58	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-14 15:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-16 15:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-04-18 13:04	Wildlife observed	Caribou	11	Foraging	N/A	N/A	N/A	N/A	N/A	-96.66653	65.40143	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-04-18 13:04	Wildlife observed	Caribou	5	Walking	N/A	N/A	N/A	N/A	N/A	-96.66653	65.40143	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-04-19 16:58	Wildlife observed	Caribou	300	Walking	Parallel to road	N/A	N/A	N/A	N/A	-96.66593	65.4021	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-04-25 16:18	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-01 16:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-09 18:02	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-08 16:37	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-04 16:59	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Pre-Blast	2024-06-02 16:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-28 16:31	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-27 16:08	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-26 16:30	Wildlife observed	Caribou	16	Walking	N/A	N/A	N/A	N/A	N/A	-96.74721	65.38507	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-05-23 16:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-22 14:36	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-09 15:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-11 15:04	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-12 18:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-13 14:47	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-15 15:23	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-16 15:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-17 14:42	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-18 15:04	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-18 15:53	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-11 15:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-13 15:01	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-15 18:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-16 15:03	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-17 15:07	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-18 15:09	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-05-22 15:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-07 16:37	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-14 15:27	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-15 16:36	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-18 15:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-19 15:50	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-21 17:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-23 16:53	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-06-25 17:37	Wildlife observed	Caribou	3	Foraging	Parallel to road	N/A	N/A	N/A	N/A	-96.6915	65.41681	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-06-29 16:27	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-07-02 16:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-07-03 16:48	Wildlife observed	Caribou	4	Foraging	Parallel to road	N/A	N/A	N/A	N/A	-96.66642	65.40173	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-03 16:48	Wildlife observed	Muskox	1	Lying Down	Parallel to road	N/A	N/A	N/A	N/A	-96.66642	65.40173	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-05 16:44	Wildlife observed	Caribou	3	Resting	Stationary	N/A	N/A	N/A	N/A	-96.68646	65.41437	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-07 16:36	Wildlife observed	Muskox	1	Foraging	N/A	N/A	N/A	N/A	N/A	-96.66648	65.40173	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-08 14:36	Wildlife observed	Caribou	1	Foraging	Stationary	N/A	N/A	N/A	N/A	-96.68217	65.41425	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-08 14:36	Wildlife observed	Caribou	2	Walking	Stationary	N/A	N/A	N/A	N/A	-96.68217	65.41425	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-15 17:51	Wildlife observed	Caribou	1	Alert	N/A	N/A	N/A	N/A	N/A	-96.67826	65.40106	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-14 17:03	Wildlife observed	Caribou	1	Lying Down	N/A	N/A	N/A	N/A	N/A	-96.66657	65.40167	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-24 16:27	Wildlife observed	Caribou	1	Lying Down	N/A	N/A	N/A	N/A	N/A	-96.70711	65.40808	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-26 16:50	Wildlife observed	Caribou	1	Trotting/running	Parallel to road	N/A	N/A	N/A	N/A	-96.70957	65.39965	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-07-28 17:48	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-07-30 15:35	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-02 16:47	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-06 17:07	Wildlife observed	Caribou	2	Lying Down	N/A	N/A	N/A	N/A	N/A	-96.71822	65.40363	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-06 17:07	Wildlife observed	Caribou	3	Walking	N/A	N/A	N/A	N/A	N/A	-96.71822	65.40363	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-03 16:35	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-07 15:13	Wildlife observed	Caribou	1	Lying Down	N/A	N/A	N/A	N/A	N/A	-96.68463	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-07 15:13	Wildlife observed	Caribou	1	Foraging	N/A	N/A	N/A	N/A	N/A	-96.68463	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-07 15:13	Wildlife observed	Caribou	1	Walking	N/A	N/A	N/A	N/A	N/A	-96.68463	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-09 15:15	Wildlife observed	Caribou	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.69429	65.41718	N/A	N/A	N/A	Not Exceeded	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Pre-Blast	2024-08-09 15:15	Wildlife observed	Caribou	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.69429	65.41718	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-09 15:15	Wildlife observed	Caribou	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.69429	65.41718	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-11 17:16	Wildlife observed	Caribou	1	Foraging	Parallel to road	N/A	N/A	N/A	N/A	-96.66974	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-11 17:16	Wildlife observed	Caribou	1	Foraging	Parallel to road	N/A	N/A	N/A	N/A	-96.66974	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-11 17:16	Wildlife observed	Caribou	2	Walking	Parallel to road	N/A	N/A	N/A	N/A	-96.66974	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-11 17:16	Wildlife observed	Caribou	1	Lying Down	Parallel to road	N/A	N/A	N/A	N/A	-96.66974	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-11 17:16	Wildlife observed	Caribou	1	Running	Parallel to road	N/A	N/A	N/A	N/A	-96.66974	65.40253	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-04 17:43	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-13 16:06	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-19 16:30	Wildlife observed	Caribou	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.68396	65.4137	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-19 16:30	Wildlife observed	Caribou	1	Standing	N/A	N/A	N/A	N/A	N/A	-96.68396	65.4137	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-19 16:30	Wildlife observed	Caribou	1	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.68396	65.4137	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-18 16:45	Wildlife observed	Caribou	1	Standing	N/A	N/A	N/A	N/A	N/A	-96.66661	65.40155	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-18 16:45	Wildlife observed	Caribou	1	Walking	N/A	N/A	N/A	N/A	N/A	-96.66661	65.40155	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-18 16:45	Wildlife observed	Caribou	2	Walking	N/A	N/A	N/A	N/A	N/A	-96.66661	65.40155	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-22 17:01	Wildlife observed	Caribou	1	Lying Down	N/A	N/A	N/A	N/A	N/A	-96.71079	65.40165	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-24 16:18	Wildlife observed	Caribou	2	Foraging	N/A	N/A	N/A	N/A	N/A	-96.66652	65.40186	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-24 16:18	Wildlife observed	Caribou	1	Walking	N/A	N/A	N/A	N/A	N/A	-96.66652	65.40186	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-08-25 16:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-28 15:49	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-08-30 16:49	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-01 17:44	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-02 16:32	Wildlife observed	Caribou	2	Lying Down	N/A	N/A	N/A	N/A	N/A	-96.6942	65.41559	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-09-02 16:32	Wildlife observed	Caribou	2	Trotting/running	N/A	N/A	N/A	N/A	N/A	-96.6942	65.41559	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-09-05 16:32	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-08 14:46	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-09 16:03	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-11 16:28	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-15 16:50	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-17 16:37	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-19 16:15	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-24 17:07	Wildlife observed	Caribou	6	Foraging	N/A	N/A	N/A	N/A	N/A	-96.69547	65.39642	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-09-21 16:32	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-25 16:28	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-27 13:39	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-28 15:27	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-29 14:06	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-09-30 16:15	Wildlife observed	Caribou	1	Lying Down	Stationary	N/A	N/A	N/A	N/A	-96.7379	65.4049	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-10-03 16:01	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-04 14:15	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-12 17:03	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-14 16:26	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-16 16:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-17 16:54	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-18 17:00	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-19 17:12	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-21 17:35	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-22 16:25	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-23 17:35	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-25 17:28	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-26 16:19	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A-4: Wildlife Observations at Whale Tail Mine in 2024

Survey Type	Date	Wildlife Observation	Species	Number	Behaviour	Travel Direction	Distance	KM Marker	Side of Road	Crossing	x coord	y coord	Deterrence	Project Related Mortality	Tolerance	Group Threshold	Mitigation
Pre-Blast	2024-10-27 16:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-10-28 16:23	Wildlife observed	Muskox	20	Feeding	N/A	N/A	N/A	N/A	N/A	-96.67643	65.38342	N/A	N/A	N/A	Exceeded	Outside blast radius
Pre-Blast	2024-10-29 16:58	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-03 16:20	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-06 16:03	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-09 16:39	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-08 15:45	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-12 15:17	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-14 15:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-15 15:52	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-17 17:20	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-20 14:10	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-22 15:08	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-24 17:05	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-28 13:54	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-11-29 14:17	Wildlife observed	Caribou	27	Walking	N/A	N/A	N/A	N/A	N/A	-96.607	65.39349	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-11-30 14:30	Wildlife observed	Caribou	5	Feeding	N/A	N/A	N/A	N/A	N/A	-96.6023	65.38263	N/A	N/A	N/A	Not Exceeded	N/A
Pre-Blast	2024-12-02 3:34	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-07 15:20	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-04 15:11	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-08 15:46	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-10 16:30	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-13 15:40	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-15 15:55	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-16 14:37	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-17 15:09	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-20 14:46	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-24 14:25	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-27 14:09	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-29 15:32	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-30 15:50	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pre-Blast	2024-12-31 16:24	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

APPENDIX B

Road Restrictions

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-01-01	Restricted Access	NA	Wildlife	caribou + muskox	70 + 7	1000 + 100	Survey	NA	1	N	N/A	N/A - Outside of sensitive season
2024-01-02	Restricted Access	NA	Wildlife	caribou + muskox	44 + 1	500 + 350	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-03	Restricted Access	NA	Wildlife	caribou	55	700	Survey	NA	1	Y	No caribou above GST observed within 1.5 km and after consulting Baker Lake HTO Monitors	N/A - Outside of sensitive season
2024-01-04	Closed (< 24 hour)	1.33	Weather	caribou	27	100	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-01-05	Closed (< 24 hour)	12.65	Weather	caribou	34	800	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-06	Closed (< 24 hour)	1.73	Wildlife	caribou	152	0	Incidental	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-01-07	Restricted Access	NA	Wildlife	caribou + muskox	19 + 5	290 + 300	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-01-08	Speed Restriction	NA	Wildlife	caribou	33	310	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-09	Speed Restriction	NA	Wildlife	caribou	40	1600	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-10	Speed Restriction	NA	Wildlife	NA	7	900	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-11	Speed Restriction	NA	Wildlife	caribou + muskox	43 + 7	1000 + 97	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-12	Restricted Access	NA	Wildlife	caribou	62	900	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-13	Closed (< 24 hour)	20.25	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-01-14	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-01-15	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-01-16	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-01-17	Closed (< 24 hour)	15.75	Weather	caribou + muskox	27 + 6	100 + 100	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-18	Closed (< 24 hour)	5.58	Weather	caribou + muskox	27 + 5	200 + 300	Survey	NA	1	Y	Weather conditions improved and No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-01-19	Speed Restriction	NA	Wildlife	NA	6	150	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-20	Speed Restriction	NA	Wildlife	caribou + muskox	17 + 15	25 + 2000	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-21	Speed Restriction	NA	Wildlife	caribou + muskox	14 + 22	100 + 1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-22	Speed Restriction	NA	Wildlife	caribou	10	10	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-23	Speed Restriction	NA	Wildlife	caribou + muskox	22 + 6	300 + 1200	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-24	Speed Restriction	NA	Wildlife	caribou	15	50	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-25	Open	NA	NA	caribou	10	200	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-26	Speed Restriction	NA	Wildlife	caribou	9	25	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-27	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-01-28	Closed (< 24 hour)	4.47	Weather	caribou + muskox	11 + 6	100 + 25	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-29	Closed (< 24 hour)	11.37	Weather	NA	NA	NA	NA	NA	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-30	Speed Restriction	NA	Wildlife	caribou + muskox	12 + 8	500 + 100	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-01-31	Restricted Access	NA	Wildlife	caribou	39	NA	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-02-01	Restricted Access	NA	Wildlife	caribou	34	1600	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-02	Restricted Access	NA	Wildlife	caribou	17	1000	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-02-03	Closed (< 24 hour)	7.47	Weather	caribou	12	0	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-04	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-05	Closed (< 24 hour)	7.00	Weather	caribou	25	350	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-06	Speed Restriction	NA	Wildlife	caribou	23	300	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-07	Open	NA	NA	caribou	15	100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-08	Speed Restriction	NA	Wildlife	caribou	21	360	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-09	Speed Restriction	NA	Wildlife	caribou	27	300	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-10	Restricted Access	NA	Wildlife	caribou	30	600	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-11	Restricted Access	NA	Wildlife	caribou	8	120	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-02-12	Closed (< 24 hour)	18.97	Weather	NA	NA	NA	NA	NA	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-13	Closed (< 24 hour)	23.28	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-14	Closed (< 24 hour)	12.57	Weather	caribou	7	300	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-15	Open	NA	NA	caribou	9	300	HTO	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-16	Speed Restriction	NA	Wildlife	caribou + muskox	16 + 8	50 + 750	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-17	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-18	Speed Restriction	NA	Wildlife	caribou + muskox	17 + 29	50 + 500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-19	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-20	Restricted Access	NA	Wildlife	caribou + muskox	35 + 14	200 + 1000	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-21	Restricted Access	NA	Wildlife	caribou	8	100	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-02-22	Closed (< 24 hour)	3.62	Weather	caribou	15	20	Incidental	NA	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-23	Speed Restriction	NA	Wildlife	caribou	25	50	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-02-24	Closed (< 24 hour)	12.13	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-25	Closed (< 24 hour)	16.43	Weather	caribou	19	25	Incidental	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-26	Closed (< 24 hour)	19.20	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-02-27	Closed (< 24 hour)	0.35	Weather	caribou	17	150	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-28	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-02-29	Speed Restriction	NA	Wildlife	caribou + muskox	6 + 41	500 + 500	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-01	Speed Restriction	NA	Wildlife	caribou + muskox	15 + 43	300 + 250	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-02	Speed Restriction	NA	Wildlife	caribou	16	0	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-03	Restricted Access	NA	Wildlife	caribou + muskox	34 + 55	1000 + 20	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-04	Restricted Access	NA	Wildlife	caribou + muskox	133 + 55	100 + 20	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-05	Restricted Access	NA	Wildlife	caribou + muskox	79 + 15	300 + 100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-06	Restricted Access	NA	Wildlife	caribou + muskox	81 + 57	0 + 20	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-03-07	Speed Restriction	NA	Wildlife	caribou	15	290	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-08	Restricted Access	NA	Wildlife	caribou + muskox	69 + 15	290 + 40	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-09	Closed (< 24 hour)	3.93	Weather	caribou + muskox	71 + 57	700 + 1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-10	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-11	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-12	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-13	Closed (< 24 hour)	4.37	Weather	caribou	19	150	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-03-14	Speed Restriction	NA	Wildlife	caribou	20	150	HTO	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-15	Restricted Access	NA	Wildlife	caribou	134	1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-16	Closed (< 24 hour)	11.75	Weather	caribou	40	750	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-17	Closed (< 24 hour)	14.92	Weather	NA	NA	NA	NA	NA	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-03-18	Restricted Access	NA	Wildlife	caribou + muskox	14 + 57	10 + 1000	Survey + Incidental	NA	1	Y	No caribou above GST observed within 1.5 km and Weather conditions improved	N/A - Outside of sensitive season
2024-03-19	Closed (< 24 hour)	17.60	Weather	caribou	25	150	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-20	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-21	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-22	Closed (< 24 hour)	2.92	Weather	caribou + muskox	6 + 14	75 + 2000	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-03-23	Open	NA	NA	caribou	7	200	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-03-24	Open	NA	NA	caribou	6	150	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-03-25	Restricted Access	NA	Wildlife	caribou + muskox	59 + 8	1200 + 350	Incidental	NA	1	Y	N/A	Daily call with GN, BL HTO, KivIA & CIRNAC - GN present on the call, field discussion with BL HTO
2024-03-26	Restricted Access	NA	Wildlife	caribou + muskox	183 + 50	880 + 990	Incidental	NA	1	Y	N/A	Field discussion with BL HTO Monitors
2024-03-27	Restricted Access	NA	Wildlife	caribou	211	800	Survey	NA	1	Y	N/A	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-03-28	Restricted Access	NA	Wildlife	caribou	154	1100	Incidental	NA	1	Y	N/A	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, KivIA, BL HTO present on the call
2024-03-29	Restricted Access	NA	Wildlife	caribou	3	300	Incidental	NA	0	Y	N/A	Field discussion with BL HTO Monitors
2024-03-30	Closed (< 24 hour)	8.50	10 Days Closure	caribou	NA	1500	Survey	NA	1	Y	N/A	N/A
2024-03-31	Closed	24.00	10 Days Closure	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-01	Closed	24.00	10 Days Closure	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-02	Closed	24.00	10 Days Closure	caribou	48	0	HTO	NA	0	Y	N/A	N/A
2024-04-03	Closed	24.00	10 Days Closure	caribou	150	1000	HTO	NA	0	Y	N/A	N/A
2024-04-04	Closed	24.00	10 Days Closure	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-05	Closed	24.00	10 Days Closure	caribou	94	300	HTO	NA	0	Y	N/A	N/A
2024-04-06	Closed	24.00	10 Days Closure	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-07	Closed	24.00	10 Days Closure	caribou + muskox	102 + 17	1000 + 10	Survey	NA	1	Y	N/A	N/A
2024-04-08	Closed	24.00	10 Days Closure	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-09	Closed	24.00	Maintenance	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-10	Closed	24.00	Wildlife	caribou	126	300	Incidental	NA	1	Y	N/A	N/A
2024-04-11	Closed	24.00	Wildlife	caribou	2	350	Survey	NA	1	Y	N/A	N/A
2024-04-12	Closed (< 24 hour)	19.65	Wildlife	caribou + muskox	7 + 15	100 + 25	Incidental + Survey	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-04-13	Closed (< 24 hour)	18.42	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-04-14	Closed (< 24 hour)	10.93	Weather	caribou + muskox	18 + 17	600 + 300	Survey + Incidental	NA	1	Y	Weather conditions improved	N/A
2024-04-15	Speed Restriction	NA	Wildlife	caribou + muskox	66 + 11	1000 + 1000	Survey + Incidental	NA	1	Y	N/A	N/A
2024-04-16	Closed (< 24 hour)	11.37	Wildlife	caribou + muskox	11 + 17	900 + 500	Incidental	NA	1	Y	N/A	N/A
2024-04-17	Closed	24.00	Wildlife	caribou + muskox	66 + 17	1600 + 500	Incidental	NA	1	Y	N/A	N/A
2024-04-18	Closed	24.00	Wildlife	caribou	138	300	Incidental	NA	1	Y	N/A	N/A
2024-04-19	Closed	24.00	Wildlife	caribou	57	750	Survey	NA	1	Y	N/A	N/A
2024-04-20	Closed	24.00	Weather	caribou	12	150	Survey	NA	1	Y	N/A	N/A
2024-04-21	Closed (< 24 hour)	2.32	Weather	caribou	9	150	Survey	NA	1	Y	Weather conditions improved	Daily call with GN, BL HTO, KivIA & CIRNAC on April 19th and 20th.
2024-04-22	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 7	50 + 50	Survey	NA	1	Y	N/A	N/A
2024-04-23	Closed (< 24 hour)	8.42	Wildlife	caribou + muskox	139 + 77	1000 + 2000	Incidental	NA	1	Y	No caribou above GST observed within 1.5km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-04-24	Speed Restriction	NA	Wildlife	caribou + muskox	9 + 14	50 + 750	Survey	NA	1	Y	N/A	N/A
2024-04-25	Speed Restriction	NA	Wildlife	caribou + muskox	9 + 56	100 + 600	Incidental	NA	1	Y	N/A	N/A

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-04-26	Restricted Access	NA	Weather	caribou + muskox	3 + 11	120 + 400	Incidental + Survey	NA	1	Y	N/A	N/A
2024-04-27	Restricted Access	NA	Weather	caribou	10	100	Incidental	NA	1	Y	Weather conditions improved	N/A
2024-04-28	Closed (< 24 hour)	7.52	Wildlife	caribou	15	390	Incidental	NA	1	y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN & BL HTO present on the call April 26th, Field discussion with BL HTO on April 27th
2024-04-29	Open	NA	NA	caribou + muskox	27 + 1	1000 + 900	Survey + Incidental	NA	1	Y	N/A	N/A
2024-04-30	Closed (< 24 hour)	9.50	Wildlife	caribou + muskox	470 + 3	0 + 800	Incidental	NA	1	Y	N/A	N/A
2024-05-01	Closed (< 24 hour)	20.00	Wildlife	caribou	63	400	Incidental	NA	1	Y	N/A	N/A
2024-05-02	Closed (< 24 hour)	17.65	Wildlife	caribou	43	990	Incidental	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-05-03	Closed (< 24 hour)	3.25	Wildlife	caribou	62	300	HTO	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-05-04	Closed (< 24 hour)	5.20	Wildlife	caribou	73	500	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call May 3rd, Field Discussion with BL HTO Monitors
2024-05-05	Closed (< 24 hour)	8.80	Wildlife	caribou	42	130	Incidental	NA	1	Y	N/A	N/A
2024-05-06	Closed (< 24 hour)	17.45	Wildlife	caribou + muskox	38 + 12	1000 + 50	Incidental	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN & BL HTO present on the call
2024-05-07	Closed (< 24 hour)	15.28	Wildlife	caribou	61	300	Incidental	NA	1	Y	N/A	N/A
2024-05-08	Closed	24.00	Wildlife	caribou	34	290	Survey	NA	1	Y	N/A	N/A
2024-05-09	Closed (< 24 hour)	18.18	Wildlife	caribou + muskox	20 + 8	250 + 100	Incidental	NA	1	Y	No caribou above GST observed within 1.5km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-05-10	Speed Restriction	NA	Wildlife	caribou + muskox	13 + 4	500 + 50	Incidental + Survey	NA	1	Y	N/A	N/A
2024-05-11	Speed Restriction	NA	Wildlife	caribou + muskox	12 + 6	300 + 150	Survey + Incidental	NA	1	Y	N/A	N/A
2024-05-12	Closed (< 24 hour)	3.67	Wildlife	caribou + muskox	45 + 5	600 + 30	Incidental	NA	1	Y	No caribou above GST observed within 1.5km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO & KivIA present on the call May 10th & 13th
2024-05-13	Speed Restriction	NA	Wildlife	caribou + muskox	27 + 3	600 + 100	Incidental + Survey	NA	1	Y	N/A	N/A
2024-05-14	Speed Restriction	NA	Wildlife	caribou + muskox	32 + 3	500 + 500	Incidental	NA	1	Y	N/A	N/A
2024-05-15	Closed (< 24 hour)	9.72	Weather/Wildlife	caribou	77	300	Survey	NA	1	Y	No caribou above GST observed within 1.5 km and Weather conditions improved	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call
2024-05-16	Speed Restriction	NA	Wildlife	caribou	19	250	Incidental	NA	1	Y	N/A	N/A
2024-05-17	Speed Restriction	NA	Wildlife	caribou + muskox	25 + 6	75 + 50	Survey	NA	1	Y	N/A	N/A
2024-05-18	Speed Restriction	NA	Wildlife	caribou + muskox	25 + 4	50 + 300	Incidental + Survey	NA	1	Y	N/A	N/A
2024-05-19	Speed Restriction	NA	Wildlife	caribou	24	600	Survey	NA	1	Y	N/A	N/A
2024-05-20	Speed Restriction	NA	Wildlife	caribou + muskox	11 + 5	600 + 50	Incidental + Survey	NA	1	Y	N/A	N/A
2024-05-21	Closed (< 24 hour)	8.93	Wildlife	caribou + muskox	53 + 2	1000 + 20	Incidental + Survey	NA	1	Y	N/A	N/A
2024-05-22	Closed (< 24 hour)	11.08	Wildlife	caribou + muskox	36 + 4	800 + 300	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO & CIRNAC present on the call
2024-05-23	Closed (< 24 hour)	6.00	Maintenance/Wildlife	caribou	52	500	Survey	NA	1	Y	N/A	N/A
2024-05-24	Closed	24.00	Maintenance/Wildlife	caribou + muskox	43 + 7	100 + 50	Survey	NA	1	Y	N/A	N/A
2024-05-25	Closed	24.00	Maintenance	caribou + muskox	21 + 4	500 + 100	Survey	NA	1	Y	N/A	N/A
2024-05-26	Closed (< 24 hour)	11.50	Maintenance	caribou + muskox	26 + 1	600 + 500	Survey	NA	1	Y	Maintenance done	N/A - Outside of sensitive season
2024-05-27	Restricted Access	NA	Wildlife	caribou + muskox	33 + 1	1500 + 400	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-05-28	Open	NA	NA	caribou + muskox	17 + 1	800 + 20	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-05-29	Open	NA	NA	caribou	12	700	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-05-30	Open	NA	NA	caribou	6	400	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-05-31	Speed Restriction	NA	Wildlife	caribou	15	400	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-01	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-02	Open	NA	NA	caribou + muskox	12 + 1	400 + 200	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-03	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-04	Open	NA	NA	caribou + muskox	8 + 4	500 + 40	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-05	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-06	Speed Restriction	NA	Wildlife	caribou	9	150	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-07	Speed Restriction	NA	Wildlife	caribou	5	100	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-08	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-09	Open	NA	NA	caribou + muskox	7 + 1	300 + 30	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-10	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-06-11	Open	NA	NA	caribou	6	500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-12	Open	NA	NA	caribou + muskox	8 + 2	300 + 0	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-13	Open	NA	NA	caribou + muskox	6 + 2	300 + 60	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-14	Speed Restriction	NA	Wildlife	caribou + muskox	18 + 3	500 + 100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-15	Speed Restriction	NA	Wildlife	caribou + muskox	6 + 33	2 + 400	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-16	Speed Restriction	NA	Wildlife	caribou + muskox	6 + 10	20 + 500	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-06-17	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 9	20 + 100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-18	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 11	10 + 600	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-19	Speed Restriction	NA	Wildlife	caribou + muskox	8 + 9	0 + 700	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-20	Speed Restriction	NA	Wildlife	caribou + muskox	6 + 1	150 + 15	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-21	Speed Restriction	NA	Wildlife	caribou + muskox	5 + 3	100 + 15	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-22	Speed Restriction	NA	Wildlife	caribou + muskox	10 + 2	NA + 100	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-23	Speed Restriction	NA	Wildlife	caribou + muskox	12 + 7	1000 + 9	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-24	Speed Restriction	NA	Wildlife	caribou + muskox	8 + 1	120 + 30	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-25	Speed Restriction	NA	Wildlife	caribou + muskox	8 + 25	780 + 100	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-26	Speed Restriction	NA	Wildlife	caribou + muskox	5 + 25	1000 + 800	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-27	Speed Restriction	NA	Wildlife	muskox	10	1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-28	Speed Restriction	NA	Wildlife	muskox	2	1	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-29	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 18	400 + 900	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-06-30	Speed Restriction	NA	Wildlife	caribou + muskox	6 + 2	400 + 1	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-01	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-02	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 19	800 + 400	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-03	Speed Restriction	NA	Wildlife	muskox	19	0	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-04	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-05	Open	NA	NA	caribou + muskox	2 + 2	40 + 10	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-06	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-07	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-08	Speed Restriction	NA	Wildlife	muskox	14	500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-09	Open	NA	NA	muskox	2	20	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-10	Open	NA	NA	muskox	1	1	Survey	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-11	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 1	850 + 1	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-12	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-13	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-14	Open	NA	NA	caribou + muskox	5 + 2	500 + 300	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-15	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-16	Open	NA	NA	muskox	10	600	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-17	Open	NA	NA	muskox	1	100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-18	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-19	Open	NA	NA	muskox	11	300	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-20	Open	NA	NA	muskox	1	30	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-21	Open	NA	NA	muskox	1	30	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-22	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-23	Closed (< 24 hour)	4.00	Cyanide	muskox	1	30	Incidental	NA	0	Y	Cyanide Convoy completed	N/A - Outside of sensitive season
2024-07-24	Closed (< 24 hour)	4.00	Cyanide	NA	NA	NA	NA	NA	0	Y	Cyanide Convoy completed	N/A - Outside of sensitive season
2024-07-25	Closed (< 24 hour)	4.00	Cyanide	NA	NA	NA	NA	NA	0	Y	Cyanide Convoy completed	N/A - Outside of sensitive season
2024-07-26	Open	NA	NA	caribou + muskox	1 + 11	100 + 30	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-27	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-28	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-29	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-07-30	Speed Restriction	NA	Wildlife	muskox	12	5	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-07-31	Open	NA	NA	muskox	1	1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-01	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-02	Open	NA	NA	muskox	1	15	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-03	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-04	Open	NA	NA	caribou + muskox	1 + 1	600 + 10	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-05	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-06	Open	NA	NA	muskox	1	30	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-07	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-08	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 53	0 + 1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-09	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-10	Open	NA	NA	caribou	1	0	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-11	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-12	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-13	Open	NA	NA	muskox	12	800	Incidental	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-14	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-15	Open	NA	NA	NA	NA	NA	NA	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-16	Speed Restriction	NA	Wildlife	caribou	150	1000	HTO	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-17	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-18	Open	NA	NA	muskox	11	150	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-19	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-20	Open	NA	NA	muskox	10	1000	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-21	Open	NA	NA	caribou + muskox	1 + 9	30 + 250	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-22	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-23	Open	NA	NA	muskox	10	100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-24	Open	NA	NA	NA	NA	NA	NA	NA	1	Y	N/A	N/A - Outside of sensitive season

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-08-25	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-26	Open	NA	NA	muskox	1	100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-27	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-28	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-29	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-08-30	Closed (< 24 hour)	12.50	Wildlife	caribou + muskox	146 + 8	200 + 100	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-08-31	Closed (< 24 hour)	10.90	Wildlife	caribou + muskox	51 + 24	100 + 800	Survey + Incidental	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-09-01	Restricted Access	NA	Wildlife	caribou + muskox	26 + 11	1000 + 3000	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-02	Closed (< 24 hour)	6.63	Wildlife	caribou + muskox	56 + 16	750 + 500	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-03	Closed	24.00	Wildlife	caribou + muskox	150 + 29	200 + 500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-04	Closed	24.00	Wildlife	caribou	102	300	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-05	Closed	24.00	Wildlife	caribou	112	250	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-06	Closed (< 24 hour)	17.43	Wildlife	caribou	35	250	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-09-07	Restricted Access	NA	Wildlife	caribou	18	500	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-09-08	Open	NA	NA	caribou + muskox	9 + 1	1000 + 100	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-09	Open	NA	NA	caribou	7	350	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-10	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-09-11	Closed (< 24 hour)	12.53	Wildlife	caribou	91	400	HTO	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-12	Closed (< 24 hour)	16.00	Wildlife	caribou + muskox	36 + 1	100 + 10	Survey + Incidental	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-09-13	Restricted Access	NA	Wildlife	caribou + muskox	4 + 1	300 + 15	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-09-14	Speed Restriction	NA	Wildlife	caribou + muskox	13 + 9	600 + 500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-15	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 1	250 + 20	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-16	Open	NA	NA	caribou + muskox	5 + 1	150 + 400	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-17	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 12	50 + 1000	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-18	Speed Restriction	NA	Wildlife	caribou	2	200	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-19	Open	NA	NA	caribou + muskox	4 + 19	600 + 700	Survey + Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-20	Open	NA	NA	caribou	4	60	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-09-21	Restricted Access	NA	Weather	caribou + muskox	15 + 20	70 + 1000	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-09-22	Restricted Access	NA	Weather	muskox	11	70	Survey	NA	1	Y	N/A	N/A
2024-09-23	Restricted Access	NA	Weather	caribou + muskox	17 + 24	200 + 200	Incidental	NA	1	Y	N/A	N/A
2024-09-24	Closed (< 24 hour)	4.28	Other	caribou + muskox	55 + 30	0 + 20	HTO + HTO	NA	1	Y	Weather conditions improved	N/A
2024-09-25	Closed (< 24 hour)	7.90	Other	caribou	7	1100	Survey	NA	1	Y	Road issue resolved	N/A
2024-09-26	Restricted Access	NA	Weather	caribou	5	0	HTO	NA	1	Y	N/A	N/A
2024-09-27	Closed (< 24 hour)	17.95	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-09-28	Closed (< 24 hour)	4.82	Weather	caribou + muskox	15 + 3	1500 + 10	Incidental	NA	1	Y	Weather conditions improved	N/A
2024-09-29	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 19	200 + 1000	Incidental + Survey	NA	1	Y	N/A	N/A
2024-09-30	Open	NA	NA	caribou + muskox	1 + 2	500 + 750	Survey	NA	1	Y	N/A	N/A
2024-10-01	Closed (< 24 hour)	9.58	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-10-02	Closed (< 24 hour)	9.78	Weather	caribou	2	300	Survey	NA	1	Y	N/A	N/A
2024-10-03	Closed (< 24 hour)	10.55	Other	NA	NA	NA	NA	NA	0	Y	Weather conditions improved	N/A
2024-10-04	Closed (< 24 hour)	11.47	Other	caribou + muskox	38 + 6	1500 + 5	Incidental	NA	1	Y	Communication issue fixed/Weather conditions improved	N/A
2024-10-05	Closed (< 24 hour)	8.27	Wildlife	caribou + muskox	500 + 25	1400 + 5	KIA + Survey	NA	1	Y	N/A	N/A
2024-10-06	Closed (< 24 hour)	15.98	Wildlife	caribou + muskox	173 + 13	1500 + 450	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	Field discussion with KivIA
2024-10-07	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 3	150 + 400	Survey	NA	1	Y	N/A	N/A
2024-10-08	Open	NA	NA	muskox	18	500	Incidental	NA	1	Y	N/A	N/A
2024-10-09	Speed Restriction	NA	Wildlife	muskox	20	5	Incidental	NA	1	Y	N/A	N/A
2024-10-10	Speed Restriction	NA	Wildlife	muskox	21	20	Incidental	NA	1	Y	N/A	N/A
2024-10-11	Speed Restriction	NA	Wildlife	muskox	19	400	Survey	NA	1	Y	N/A	N/A
2024-10-12	Open	NA	NA	NA	NA	NA	NA	NA	1	Y	N/A	N/A
2024-10-13	Open	NA	NA	caribou + muskox	33 + 18	500 + 600	Incidental + Survey	NA	1	Y	N/A	N/A
2024-10-14	Speed Restriction	NA	Wildlife	caribou + muskox	19 + 13	500 + 200	Incidental + Survey	NA	1	Y	N/A	N/A
2024-10-15	Restricted Access	NA	Maintenance	caribou + muskox	58 + 21	1 + 500	Incidental	NA	1	Y	N/A	N/A
2024-10-16	Closed (< 24 hour)	10.05	Wildlife	caribou + muskox	148 + 4	50 + 10	Incidental + Survey	NA	1	Y	Weather conditions improved	N/A
2024-10-17	Closed (< 24 hour)	11.58	Wildlife	caribou + muskox	56 + 23	400 + 400	Survey + Incidental	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO & CIRNAC present on the call on October 16th, Field Discussion with BL HTO Monitors
2024-10-18	Closed (< 24 hour)	23.33	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-10-19	Closed (< 24 hour)	3.50	Weather	muskox	7	15	Survey	NA	1	Y	Weather conditions improved	N/A
2024-10-20	Open	NA	NA	caribou + muskox	33 + 7	200 + 70	Survey	NA	1	Y	N/A	N/A
2024-10-21	Open	NA	NA	muskox	2	250	Incidental	NA	1	Y	N/A	N/A
2024-10-22	Open	NA	NA	caribou	3	50	Survey	NA	1	Y	N/A	N/A
2024-10-23	Speed Restriction	NA	Wildlife	caribou + muskox	35 + 5	80 + 20	Survey + Incidental	NA	1	Y	N/A	N/A
2024-10-24	Restricted Access	NA	Weather	muskox	5	40	Survey	NA	1	Y	N/A	N/A
2024-10-25	Restricted Access	NA	Weather	muskox	5	65	Survey	NA	1	Y	Weather conditions improved	N/A
2024-10-26	Closed (< 24 hour)	14.17	Wildlife	caribou + muskox	300 + 13	1000 + 750	Incidental	NA	1	Y	N/A	N/A
2024-10-27	Closed	24.00	Wildlife	caribou + muskox	1000 + 13	500 + 250	Incidental + Survey	NA	1	Y	N/A	N/A
2024-10-28	Closed	24.00	Wildlife	caribou + muskox	500 + 21	1500 + 500	Survey + Incidental	NA	1	Y	N/A	N/A
2024-10-29	Closed	24.00	Wildlife	caribou + muskox	1000 + 19	6 + 300	Incidental	NA	1	Y	N/A	N/A
2024-10-30	Closed	24.00	Wildlife	NA	NA	NA	NA	NA	0	Y	N/A	N/A
2024-10-31	Closed	24.00	Wildlife	caribou + muskox	850 + 19	1500 + 500	Survey + Incidental	NA	1	Y	N/A	N/A
2024-11-01	Closed	24.00	Wildlife	caribou + muskox	750 + 2	750 + 750	Survey + Incidental	NA	1	Y	N/A	N/A
2024-11-02	Closed	24.00	Wildlife	caribou + muskox	4000 + 22	1200 + 1000	Survey	NA	1	Y	N/A	N/A
2024-11-03	Closed	24.00	Wildlife	caribou + muskox	108 + 13	400 + 1000	Survey	NA	1	Y	N/A	N/A
2024-11-04	Closed	24.00	Wildlife	caribou + muskox	NA + 3	0 + 150	Survey + Incidental	NA	1	Y	N/A	N/A
2024-11-05	Closed	24.00	Wildlife	caribou + muskox	174 + 5	25 + 750	Survey	NA	1	Y	N/A	N/A
2024-11-06	Closed	24.00	Wildlife	caribou + muskox	200 + 12	1500 + 450	KIA + Survey	NA	1	Y	N/A	N/A
2024-11-07	Closed	24.00	Wildlife	caribou + muskox	129 + 11	200 + 150	Incidental + Survey	NA	1	Y	N/A	N/A
2024-11-08	Closed	24.00	Wildlife	caribou + muskox	24 + 5	650 + 200	Incidental + Survey	NA	1	Y	N/A	N/A
2024-11-09	Closed	24.00	Wildlife	caribou + muskox	144 + 11	800 + 500	Incidental + Survey	NA	1	Y	N/A	N/A
2024-11-10	Closed (< 24 hour)	16.80	Wildlife	caribou + muskox	4 + 40	80 + 100	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - BL HTO & KivIA present on the call, Field Discussion with BL HTO Monitors
2024-11-11	Open	NA	NA	muskox	11	150	Survey	NA	1	Y	N/A	N/A
2024-11-12	Speed Restriction	NA	Wildlife	caribou + muskox	58 + 3	100 + 140	HTO + Survey	NA	1	Y	N/A	N/A
2024-11-13	Open	NA	NA	caribou + muskox	1 + 23	750 + 3000	Survey	NA	1	Y	N/A	N/A
2024-11-14	Speed Restriction	NA	Wildlife	muskox	15	50	Survey	NA	1	Y	N/A	N/A
2024-11-15	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 23	100 + 200	Survey	NA	1	Y	N/A	N/A
2024-11-16	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 21	250 + 250	Survey	NA	1	Y	N/A	N/A
2024-11-17	Open	NA	NA	caribou + muskox	1 + 14	100 + 1500	Incidental	NA	1	Y	N/A	N/A
2024-11-18	Restricted Access	NA	Weather	NA	NA	NA	NA	NA	1	Y	N/A	N/A
2024-11-19	Restricted Access	NA	Weather	caribou + muskox	4 + 17	700 + 700	Survey	NA	1	Y	Weather conditions improved	N/A
2024-11-20	Open	NA	NA	muskox	29	500	Incidental	NA	1	Y	N/A	N/A
2024-11-21	Restricted Access	NA	Weather	caribou + muskox	83 + 33	200 + 150	Survey	NA	1	Y	N/A	N/A
2024-11-22	Restricted Access	NA	Weather	caribou + muskox	79 + 30	500 + 106	Survey	NA	1	Y	N/A	N/A
2024-11-23	Restricted Access	NA	Weather	NA	NA	NA	NA	NA	0	Y	Weather conditions improved	N/A
2024-11-24	Speed Restriction	NA	Wildlife	caribou + muskox	70 + 24	500 + 300	Survey	NA	1	Y	N/A	N/A
2024-11-25	Closed (< 24 hour)	11.83	Wildlife	caribou + muskox	186 + 21	350 + 1500	Incidental + Survey	NA	1	Y	N/A	N/A
2024-11-26	Closed	24.00	Wildlife	caribou + muskox	600 + 13	800 + 500	Survey	NA	1	Y	N/A	N/A
2024-11-27	Closed	24.00	Wildlife	caribou	450	500	Survey	NA	1	Y	N/A	N/A
2024-11-28	Closed	24.00	Wildlife	caribou + muskox	200 + 6	300 + 650	Survey	NA	1	Y	N/A	N/A
2024-11-29	Closed	24.00	Wildlife	caribou + muskox	261 + 11	500 + 50	Survey	NA	1	Y	N/A	N/A
2024-11-30	Closed	24.00	Wildlife	caribou	350	1000	Survey	NA	1	Y	N/A	N/A
2024-12-01	Closed	24.00	Wildlife	caribou	500	150	Survey	NA	1	Y	N/A	N/A
2024-12-02	Closed	24.00	Wildlife	caribou	250	100	Survey	NA	1	Y	N/A	N/A
2024-12-03	Closed (< 24 hour)	16.50	Wildlife	caribou + muskox	8 + 7	400 + 300	Incidental + Survey	NA	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-12-04	Closed (< 24 hour)	14.08	Wildlife	caribou + muskox	150 + 6	660 + 100	Survey	NA	1	Y	N/A	N/A
2024-12-05	Closed	24.00	Wildlife	caribou + muskox	230 + 5	500 + 200	Incidental	NA	1	Y	N/A	N/A
2024-12-06	Closed (< 24 hour)	15.00	Wildlife	caribou + muskox	13 + 8	90 + 1000	Survey	NA	1	Y	No caribou above GST observed within 1.5km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-12-07	Open	NA	NA	caribou + muskox	9 + 5	1000 + 600	Survey	NA	1	Y	N/A	N/A
2024-12-08	Closed (< 24 hour)	12.00	Wildlife	caribou + muskox	500 + 6	300 + 60	Survey	NA	1	Y	N/A	N/A
2024-12-09	Closed	24.00	Wildlife	caribou + muskox	206 + 5	800 + 60	Incidental + Survey	NA	1	Y	N/A	N/A
2024-12-10	Closed	24.00	Wildlife	caribou + muskox	200 + 6	800 + 40	HTO	NA	0	Y	N/A	N/A
2024-12-11	Closed	24.00	Wildlife	caribou + muskox	NA + 6	800 + 40	Survey	NA	1	Y	N/A	N/A
2024-12-12	Closed	24.00	Wildlife	caribou	400	100	Incidental	NA	1	Y	N/A	N/A
2024-12-13	Closed	24.00	Wildlife	caribou + muskox	81 + 9	100 + 100	Survey	NA	1	Y	N/A	N/A
2024-12-14	Closed	24.00	Wildlife	caribou + muskox	118 + 35	200 + 3000	Survey	NA	1	Y	N/A	N/A
2024-12-15	Closed	24.00	Wildlife	caribou + muskox	250 + 16	200 + 100	Survey	NA	1	Y	N/A	N/A
2024-12-16	Closed	24.00	Wildlife	caribou + muskox	NA + 42	1000 + 400	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-17	Closed	24.00	Wildlife	caribou + muskox	57 + 11	500 + 500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-18	Closed (< 24 hour)	17.60	Wildlife	caribou + muskox	40 + 5	500 + 1500	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-12-19	Restricted Access	NA	Wildlife	muskox	55	2000	Survey	NA	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season

Table B-1: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the All-Weather Access Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consulation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-12-20	Speed Restriction	NA	Wildlife	muskox	60	750	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-21	Closed (< 24 hour)	0.63	Other	caribou + muskox	19 + 53	1 + 1000	Incidental + Survey	NA	1	Y	Communications were restored	N/A - Outside of sensitive season
2024-12-22	Open	NA	NA	caribou	13	1500	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-23	Speed Restriction	NA	Wildlife	caribou + muskox	5 + 23	800 + 600	Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-24	Speed Restriction	NA	Wildlife	caribou + muskox	7 + 43	800 + 1500	Incidental + Survey	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-25	Closed (< 24 hour)	12.25	Weather	muskox	3	800	Survey	NA	1	N	N/A	N/A - Outside of sensitive season
2024-12-26	Closed	24.00	Weather	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-12-27	Closed (< 24 hour)	12.65	Weather	NA	NA	NA	NA	NA	0	N	N/A	N/A - Outside of sensitive season
2024-12-28	Restricted Access	NA	Weather	caribou	11	850	Survey	NA	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-12-29	Open	NA	NA	NA	NA	NA	NA	NA	1	Y	N/A	N/A - Outside of sensitive season
2024-12-30	Open	NA	NA	NA	NA	NA	NA	NA	0	Y	N/A	N/A - Outside of sensitive season
2024-12-31	Open	NA	NA	muskox	4	800	Incidental	NA	1	Y	N/A	N/A - Outside of sensitive season

Table B-2: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the Whale Tail Haul Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consultation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-01-01	Open	NA	NA	caribou	23	1200	Survey	1	1	N	N/A	N/A - Outside of sensitive season
2024-01-02	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-03	Open	NA	NA	NA	NA	NA	NA	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-04	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-05	Closed (< 24 hour)	6.50	Weather	muskox	13	150	Incidental	1	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-06	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-07	Speed Restriction	NA	Wildlife	muskox	27	75	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-08	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-09	Open	NA	NA	muskox	4	800	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-01-10	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-11	Speed Restriction	NA	Wildlife	muskox	7	50	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-12	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-13	Closed (< 24 hour)	20.25	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-14	Closed (< 24 hour)	18.75	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-15	Closed	24.00	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-16	Closed (< 24 hour)	14.07	Weather	caribou + muskox	8 + 18	700 + 100	Survey	1	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-17	Closed (< 24 hour)	0.87	Weather	caribou + muskox	9 + 18	400 + 50	Incidental + Survey	0	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-18	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-19	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 17	325 + 100	Survey + Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-20	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-21	Speed Restriction	NA	Wildlife	caribou + muskox	9 + 16	250 + 50	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-22	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-23	Speed Restriction	NA	Wildlife	caribou + muskox	5 + 16	200 + 300	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-24	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-25	Speed Restriction	NA	Wildlife	caribou + muskox	4 + 17	800 + 30	Survey + Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-01-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-27	Open	NA	NA	NA	NA	NA	NA	0	1	Y	N/A	N/A - Outside of sensitive season
2024-01-28	Closed (< 24 hour)	1.03	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-29	Closed (< 24 hour)	3.95	Weather	caribou	9	1500	Incidental	0	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-01-30	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-01-31	Speed Restriction	NA	Wildlife	caribou + muskox	9 + 19	350 + 150	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-02-01	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-02	Speed Restriction	NA	Wildlife	caribou + muskox	14 + 23	150 + 400	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-02-03	Closed (< 24 hour)	2.70	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-04	Closed (< 24 hour)	12.20	Weather	muskox	17	100	Survey	0	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-05	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-06	Speed Restriction	NA	Wildlife	muskox	15	100	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-02-07	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-08	Speed Restriction	NA	Wildlife	muskox	18	1000	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-02-09	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-10	Speed Restriction	NA	Wildlife	muskox	16	100	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-02-11	Speed Restriction	NA	Wildlife	muskox	22	200	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-02-12	Closed (< 24 hour)	9.92	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-13	Closed (< 24 hour)	10.67	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-14	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-15	Speed Restriction	NA	Wildlife	muskox	27	150	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-02-16	Speed Restriction	NA	Wildlife	muskox	20	300	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-17	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-18	Speed Restriction	NA	Maintenance	caribou + muskox	15 + 35	500 + 50	Incidental + Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-02-19	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-20	Open	NA	NA	muskox	48	600	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-02-21	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-22	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-23	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-24	Closed (< 24 hour)	10.18	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-02-25	Speed Restriction	NA	Maintenance	caribou + muskox	2 + 4	300 + 25	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-02-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-27	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-02-29	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-01	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-02	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-03	Open	NA	NA	muskox	4	2000	Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-03-04	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-05	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-06	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-07	Speed Restriction	NA	Wildlife	muskox	16	650	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-03-08	Open	NA	NA	muskox	8	800	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-09	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season

Table B-2: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the Whale Tail Haul Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consultation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-03-10	Closed (< 24 hour)	22.40	Weather	NA	NA	NA	NA	0	0	y	N/A	N/A - Outside of sensitive season
2024-03-11	Closed	24.00	Weather	NA	NA	NA	NA	0	0	y	N/A	N/A - Outside of sensitive season
2024-03-12	Closed (< 24 hour)	5.35	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-03-13	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-14	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-15	Speed Restriction	NA	Wildlife	muskox	20	400	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-17	Speed Restriction	NA	Wildlife	muskox	37	100	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-03-18	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-19	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-20	Speed Restriction	NA	Wildlife	muskox	25	450	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-21	Open	NA	NA	caribou + muskox	11 + 44	1000 + 2000	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-22	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-23	Open	NA	NA	muskox	2	600	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-03-24	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-25	Open	NA	NA	caribou	8	300	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-03-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-27	Open	NA	NA	NA	NA	NA	NA	0	1	Y	N/A	N/A - Outside of sensitive season
2024-03-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-29	Open	NA	NA	NA	NA	NA	NA	0	1	Y	N/A	N/A - Outside of sensitive season
2024-03-30	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-03-31	Speed Restriction	NA	Wildlife	caribou + muskox	8 + 31	400 + 100	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-04-01	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-02	Speed Restriction	NA	Wildlife	muskox	35	900	Survey	1	1	Y	N/A	N/A
2024-04-03	Open	NA	NA	caribou	11	1000	Survey	1	1	Y	N/A	N/A
2024-04-04	Closed (< 24 hour)	17.00	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-05	Closed (< 24 hour)	8.22	Weather	caribou + muskox	8 + 8	100 + 350	Survey	1	1	Y	Weather conditions improved	N/A
2024-04-06	Speed Restriction	NA	Wildlife	caribou + muskox	9 + 8	100 + 100	Survey	0	1	Y	N/A	N/A
2024-04-07	Speed Restriction	NA	Wildlife	caribou + muskox	11 + 5	50 + 500	Survey	1	1	Y	N/A	N/A
2024-04-08	Closed (< 24 hour)	10.85	Wildlife	caribou + muskox	45 + 8	500 + 100	Survey + Incidental	0	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO & KivIA present on the call
2024-04-09	Closed (< 24 hour)	10.42	Wildlife	caribou + muskox	180 + 7	100 + 40	Incidental	1	1	Y	N/A	N/A
2024-04-10	Closed	24.00	Wildlife	caribou	85	50	Survey	0	1	Y	N/A	N/A
2024-04-11	Closed	24.00	Wildlife	caribou + muskox	49 + 17	200 + 1000	Survey + Incidental	0	1	Y	N/A	N/A
2024-04-12	Closed	24.00	10 Days Closure	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-13	Closed	24.00	10 Days Closure	caribou	60	100	Survey	0	1	Y	N/A	N/A
2024-04-14	Closed	24.00	10 Days Closure	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-15	Closed	24.00	10 Days Closure	caribou + muskox	500 + 8	50 + 50	Survey	0	1	Y	N/A	N/A
2024-04-16	Closed	24.00	10 Days Closure	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-17	Closed	24.00	10 Days Closure	caribou + muskox	400 + 8	50 + 200	Incidental	0	1	Y	N/A	N/A
2024-04-18	Closed	24.00	10 Days Closure	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-19	Closed	24.00	10 Days Closure	caribou + muskox	450 + 1	150 + 300	Survey + Incidental	0	1	Y	N/A	N/A
2024-04-20	Closed	24.00	10 Days Closure	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-04-21	Closed	24.00	Wildlife	caribou + muskox	300 + 5	800 + 750	Survey	0	1	Y	N/A	N/A
2024-04-22	Closed	24.00	Wildlife	caribou + muskox	170 + 9	0 + 700	Incidental + Survey	0	1	Y	N/A	N/A
2024-04-23	Closed	24.00	Wildlife	caribou	350	700	Survey	1	1	Y	N/A	N/A
2024-04-24	Closed	24.00	Wildlife	caribou + muskox	92 + 6	100 + 600	Incidental + Survey	0	1	Y	N/A	N/A
2024-04-25	Closed	24.00	Wildlife	caribou + muskox	171 + 3	800 + 400	Survey + Incidental	0	1	Y	N/A	N/A
2024-04-26	Closed	24.00	Wildlife	caribou	250	400	Survey	0	1	Y	N/A	N/A
2024-04-27	Closed	24.00	Wildlife	caribou	80	400	Survey	0	1	Y	N/A	N/A
2024-04-28	Closed (< 24 hour)	17.55	Wildlife	caribou + muskox	103 + 2	300 + 200	Survey	1	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN & BL HTO present on the call April 26th, Field discussion with BL HTO on April 27th
2024-04-29	Open	NA	NA	caribou	31	800	Survey	0	1	Y	NA	N/A
2024-04-30	Closed (< 24 hour)	NA	Wildlife	caribou	670	0	Survey	0	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call
2024-05-01	Closed	24.00	Wildlife	caribou + muskox	587 + 1	0 + 100	Survey	0	1	Y	N/A	N/A
2024-05-02	Closed (< 24 hour)	17.83	Wildlife	caribou + muskox	80 + 3	1500 + 80	Incidental	1	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors
2024-05-03	Open	NA	NA	caribou + muskox	15 + 1	200 + 100	Incidental	0	1	Y	N/A	N/A
2024-05-04	Open	NA	NA	caribou + muskox	20 + 2	800 + 30	Survey	1	1	Y	N/A	N/A
2024-05-05	Open	NA	NA	caribou	4	400	Survey	0	1	Y	N/A	N/A
2024-05-06	Open	NA	NA	caribou	23	1500	Survey	0	1	Y	N/A	N/A
2024-05-07	Open	NA	NA	caribou	34	500	Survey	1	1	Y	N/A	N/A
2024-05-08	Open	NA	NA	caribou + muskox	10 + 4	800 + 50	Survey	0	1	Y	N/A	N/A
2024-05-09	Closed (< 24 hour)	1.50	Wildlife	caribou	40	20	Incidental	0	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call, Field Discussion with BL HTO Monitors

Table B-2: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the Whale Tail Haul Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consultation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-05-10	Open	NA	NA	caribou	5	250	Incidental	1	1	Y	N/A	N/A
2024-05-11	Open	NA	NA	caribou + muskox	22 + 8	500 + 200	Survey	1	1	Y	N/A	N/A
2024-05-12	Open	NA	NA	caribou + muskox	9 + 4	1000 + 400	Survey	1	1	Y	N/A	N/A
2024-05-13	Open	NA	NA	caribou + muskox	8 + 4	50 + 400	Incidental	1	1	Y	N/A	N/A
2024-05-14	Speed Restriction	NA	Wildlife	caribou + muskox	15 + 9	450 + 300	Survey	1	1	Y	N/A	N/A
2024-05-15	Restricted Access	NA	Weather	caribou + muskox	31 + 4	200 + 100	Survey	1	1	Y	N/A	N/A
2024-05-16	Restricted Access	NA	Weather	muskox	5	50	Incidental	1	1	Y	Weather conditions improved	N/A
2024-05-17	Speed Restriction	NA	Wildlife	caribou + muskox	14 + 6	100 + 20	Survey	1	1	Y	N/A	N/A
2024-05-18	Speed Restriction	NA	Wildlife	caribou	32	200	Survey	1	1	Y	N/A	N/A
2024-05-19	Closed (< 24 hour)	3.13	Wildlife	caribou + muskox	43 + 2	200 + 75	Survey	1	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - GN, BL HTO, KivIA & CIRNAC present on the call on May 17th
2024-05-20	Speed Restriction	NA	Wildlife	caribou + muskox	9 + 6	200 + 100	Survey	1	1	Y	N/A	N/A
2024-05-21	Speed Restriction	NA	Wildlife	caribou + muskox	16 + 6	300 + 150	Incidental	1	1	Y	N/A	N/A
2024-05-22	Open	NA	NA	caribou	29	350	Survey	1	1	Y	N/A	N/A
2024-05-23	Open	NA	NA	caribou + muskox	4 + 5	300 + 15	Viewshed	1	1	Y	N/A	N/A
2024-05-24	Speed Restriction	NA	Wildlife	caribou + muskox	22 + 4	500 + 150	Survey	1	1	Y	N/A	N/A
2024-05-25	Open	NA	NA	caribou	13	500	Incidental	1	1	Y	N/A	N/A
2024-05-26	Open	NA	NA	caribou + muskox	7 + 5	300 + 300	Survey + Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-05-27	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 1	80 + 5	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-05-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-05-29	Open	NA	NA	caribou + muskox	8 + 5	600 + 120	Survey + Viewshed	1	1	Y	N/A	N/A - Outside of sensitive season
2024-05-30	Open	NA	NA	caribou + muskox	13 + 6	600 + 160	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-05-31	Open	NA	NA	caribou + muskox	13 + 3	100 + 100	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-06-01	Speed Restriction	NA	Wildlife	caribou + muskox	16 + 2	300 + 150	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-02	Open	NA	NA	caribou + muskox	2 + 7	75 + 600	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-03	Speed Restriction	NA	Wildlife	caribou + muskox	10 + 4	1000 + 10	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-06-04	Speed Restriction	NA	Maintenance	caribou + muskox	12 + 4	1000 + 250	Viewshed + Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-06-05	Open	NA	NA	caribou	10	200	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-06	Open	NA	NA	caribou + muskox	16 + 8	800 + 200	Viewshed	1	0	Y	N/A	N/A - Outside of sensitive season
2024-06-07	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-08	Speed Restriction	NA	Wildlife	muskox	8	5	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-06-09	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-10	Speed Restriction	NA	Wildlife	muskox	2	20	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-11	Speed Restriction	NA	Wildlife	caribou + muskox	11 + 16	500 + 150	Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-12	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 1	250 + 5	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-13	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-14	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-15	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 2	100 + 25	Incidental + Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-06-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-17	Speed Restriction	NA	Wildlife	caribou + muskox	19 + 40	1000 + 100	Survey + Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-18	Speed Restriction	NA	Wildlife	muskox	26	100	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-19	Speed Restriction	NA	Wildlife	caribou + muskox	12 + 30	200 + 100	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-20	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-21	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-22	Speed Restriction	NA	Wildlife	caribou + muskox	5 + 22	300 + 200	Survey + Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-23	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-24	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 42	10 + 300	Survey + Viewshed	1	1	Y	N/A	N/A - Outside of sensitive season
2024-06-25	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-27	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 22	700 + 50	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-06-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-29	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-06-30	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-01	Open	NA	NA	caribou + muskox	1 + 8	200 + 300	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-07-02	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-03	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-04	Speed Restriction	NA	Wildlife	muskox	11	10	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-05	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-06	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 14	5 + 30	Incidental	1	1	Y	N/A	N/A - Outside of sensitive season
2024-07-07	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-08	Speed Restriction	NA	Wildlife	muskox	23	150	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-09	Speed Restriction	NA	Wildlife	muskox	14	200	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-10	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-11	Speed Restriction	NA	Wildlife	muskox	26	400	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-07-12	Open	NA	NA	muskox	1	5	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-13	Speed Restriction	NA	Wildlife	muskox	19	300	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-07-14	Open	NA	NA	caribou + muskox	1 + 18	0 + 600	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-07-15	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season

Table B-2: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the Whale Tail Haul Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consultation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-07-17	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-18	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-19	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-20	Open	NA	NA	muskox	1	100	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-07-21	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-22	Open	NA	NA	muskox	8	100	Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-07-23	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-24	Open	NA	NA	muskox	1	350	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-07-25	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-27	Open	NA	NA	caribou + muskox	1 + 1	5 + 5	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-07-28	Open	NA	NA	muskox	12	350	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-07-29	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-07-30	Closed (< 24 hour)	5.50	Wildlife	caribou + muskox	128 + 10	50 + 300	Incidental + Viewshed	1	1	Y	N/A	N/A - Outside of sensitive season
2024-07-31	Closed (< 24 hour)	16.17	Wildlife	caribou + muskox	250 + 9	100 + 150	Survey + Incidental	0	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-08-01	Restricted Access	NA	Wildlife	caribou + muskox	45 + 13	800 + 600	Incidental + Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-02	Restricted Access	NA	Wildlife	caribou + muskox	17 + 1	500 + 5	Incidental + Survey	0	1	Y	No caribou above GST observed within 1.5 km	N/A - Outside of sensitive season
2024-08-03	Open	NA	NA	caribou + muskox	3 + 20	200 + 800	Incidental + Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-04	Open	NA	NA	muskox	9	100	Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-05	Open	NA	NA	muskox	12	800	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-06	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 12	50 + 900	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-08-07	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 16	0 + 200	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-08	Speed Restriction	NA	Wildlife	caribou	2	0	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-09	Speed Restriction	NA	Wildlife	caribou	1	0	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-10	Speed Restriction	NA	Wildlife	caribou + muskox	1 + 14	5 + 550	Survey + Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-11	Open	NA	NA	caribou	0	0	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-12	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 12	0 + 500	Incidental + Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-13	Open	NA	NA	caribou	1	50	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-14	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-15	Open	NA	NA	muskox	11	1000	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-17	Open	NA	NA	caribou + muskox	1 + 2	5 + 30	Incidental + Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-08-18	Open	NA	NA	caribou + muskox	1 + 8	1 + 50	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-19	Speed Restriction	NA	Wildlife	caribou	1	0	Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-20	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-21	Speed Restriction	NA	Wildlife	caribou + muskox	2 + 3	0 + 500	Survey + Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-22	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-23	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-24	Open	NA	NA	muskox	5	650	Viewshed	1	1	Y	N/A	N/A - Outside of sensitive season
2024-08-25	Open	NA	NA	caribou	1	0	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-26	Open	NA	NA	caribou + muskox	8 + 1	250 + 100	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-27	Open	NA	NA	caribou + muskox	1 + 6	0 + 200	Survey + Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-08-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-29	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-30	Open	NA	NA	muskox	4	200	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-08-31	Speed Restriction	NA	Wildlife	caribou + muskox	3 + 23	0 + 300	Survey	1	1	Y	N/A	N/A - Outside of sensitive season
2024-09-01	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-02	Restricted Access	NA	Weather	muskox	13	0	Incidental	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-09-03	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-04	Open	NA	NA	muskox	1	100	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-09-05	Open	NA	NA	caribou	3	100	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-09-06	Open	NA	NA	caribou	2	130	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-09-07	Open	NA	NA	caribou	2	25	Incidental	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-08	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-09	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-09-10	Restricted Access	NA	Weather	NA	NA	NA	NA	0	1	Y	N/A	N/A - Outside of sensitive season
2024-09-11	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-12	Restricted Access	NA	Weather	caribou	2	25	Incidental	0	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-09-13	Closed (< 24 hour)	0.22	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-09-14	Open	NA	NA	caribou	4	400	Viewshed	1	0	Y	N/A	N/A - Outside of sensitive season
2024-09-15	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-17	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-18	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-19	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-20	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-09-21	Restricted Access	NA	Weather	NA	NA	NA	NA	1	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-09-22	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A

Table B-2: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the Whale Tail Haul Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consultation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-09-23	Restricted Access	NA	Weather	muskox	28	25	Incidental	1	1	Y	N/A	N/A
2024-09-24	Restricted Access	NA	Weather	muskox	36	800	Survey	0	1	Y	Weather conditions improved	N/A
2024-09-25	Open	NA	NA	muskox	1	400	Viewshed	1	1	Y	N/A	N/A
2024-09-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-09-27	Closed (< 24 hour)	1.00	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A
2024-09-28	Open	NA	NA	caribou + muskox	8 + 8	250 + 50	Incidental	1	1	Y	N/A	N/A
2024-09-29	Open	NA	NA	muskox	2	300	Survey	0	1	Y	N/A	N/A
2024-09-30	Open	NA	NA	muskox	22	1000	Incidental	0	0	Y	N/A	N/A
2024-10-01	Closed (< 24 hour)	9.53	Weather	muskox	17	2000	Viewshed	1	1	Y	N/A	N/A
2024-10-02	Closed (< 24 hour)	9.80	Weather	NA	NA	NA	NA	0	1	Y	Weather conditions improved	N/A
2024-10-03	Restricted Access	NA	Weather	caribou + muskox	1 + 27	0 + 2000	Survey	1	1	Y	Weather conditions improved	N/A
2024-10-04	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A
2024-10-05	Speed Restriction	NA	Wildlife	muskox	7	20	Survey	1	1	Y	N/A	N/A
2024-10-06	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-07	Open	NA	NA	caribou	3	200	Incidental	1	1	Y	N/A	N/A
2024-10-08	Speed Restriction	NA	Wildlife	caribou	51	250	Incidental	0	0	Y	N/A	N/A
2024-10-09	Speed Restriction	NA	Wildlife	muskox	26	100	Incidental	1	1	Y	N/A	N/A
2024-10-10	Closed (< 24 hour)	0.60	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-11	Restricted Access	NA	Weather	caribou + muskox	58 + 25	150 + 300	Survey	1	1	Y	N/A	N/A
2024-10-12	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-13	Restricted Access	NA	Weather	muskox	3	1500	Survey	1	1	Y	Weather conditions improved	N/A
2024-10-14	Restricted Access	NA	Weather	caribou + muskox	67 + 2	300 + 25	Incidental + Survey	0	1	Y	N/A	N/A
2024-10-15	Restricted Access	NA	Weather	muskox	6	1500	Viewshed	1	1	Y	N/A	N/A
2024-10-16	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A
2024-10-17	Open	NA	NA	muskox	9	500	Survey	1	1	Y	N/A	N/A
2024-10-18	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-19	Restricted Access	NA	Weather	caribou + muskox	1 + 10	210 + 1	Survey + Viewshed	1	1	Y	Weather conditions improved	N/A
2024-10-20	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-21	Open	NA	NA	muskox	2	200	Survey	0	1	Y	N/A	N/A
2024-10-22	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-23	Speed Restriction	NA	Wildlife	muskox	18	400	Viewshed	1	1	Y	N/A	N/A
2024-10-24	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-25	Open	NA	NA	muskox	12	600	Survey	1	1	Y	N/A	N/A
2024-10-26	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-27	Open	NA	NA	muskox	10	500	Viewshed	1	0	Y	N/A	N/A
2024-10-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-29	Closed (< 24 hour)	9.28	Weather	muskox	23	50	Incidental	0	1	Y	Weather conditions improved	N/A
2024-10-30	Closed (< 24 hour)	14.03	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-10-31	Closed (< 24 hour)	8.65	Weather	muskox	25	25	Survey	0	1	Y	Weather conditions improved	N/A
2024-11-01	Speed Restriction	NA	Wildlife	muskox	19	400	Survey	0	1	Y	N/A	N/A
2024-11-02	Speed Restriction	NA	Wildlife	caribou	12	200	Incidental	0	0	Y	N/A	N/A
2024-11-03	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-04	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-05	Speed Restriction	NA	Wildlife	muskox	23	0	Viewshed	1	1	Y	N/A	N/A
2024-11-06	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-07	Open	NA	NA	NA	NA	NA	NA	1	1	Y	N/A	N/A
2024-11-08	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-09	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A
2024-11-10	Open	NA	NA	muskox	28	2000	Viewshed	1	1	Y	N/A	N/A
2024-11-11	Closed (< 24 hour)	0.92	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A
2024-11-12	Open	NA	NA	NA	NA	NA	NA	1	0	Y	N/A	N/A
2024-11-13	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-14	Open	NA	NA	NA	NA	NA	NA	1	1	Y	N/A	N/A
2024-11-15	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-17	Open	NA	NA	NA	NA	NA	NA	0	1	Y	N/A	N/A
2024-11-18	Restricted Access	NA	Weather	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-19	Restricted Access	NA	Weather	caribou + muskox	18 + 1	500 + 50	Survey	1	1	Y	Weather conditions improved	N/A
2024-11-20	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-21	Open	NA	NA	muskox	4	600	Survey	1	1	Y	N/A	N/A
2024-11-22	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-11-23	Restricted Access	NA	Weather	muskox	5	100	Survey	1	1	Y	Weather conditions improved	N/A
2024-11-24	Open	NA	NA	caribou	17	700	Incidental	0	0	Y	N/A	N/A
2024-11-25	Open	NA	NA	muskox	4	20	Survey	0	1	Y	N/A	N/A
2024-11-26	Speed Restriction	NA	Wildlife	caribou + muskox	69 + 17	300 + 1500	Incidental + Survey	0	1	Y	N/A	N/A
2024-11-27	Closed (< 24 hour)	12.07	Wildlife	caribou + muskox	700 + 6	1000 + 150	Incidental + Survey	1	1	Y	N/A	N/A
2024-11-28	Closed	24.00	Wildlife	caribou + muskox	950 + 16	500 + 1500	Survey	0	1	Y	N/A	N/A
2024-11-29	Closed	24.00	Wildlife	caribou + muskox	230 + 13	75 + 450	Survey	0	1	Y	N/A	N/A
2024-11-30	Closed	24.00	Wildlife	caribou + muskox	400 + 16	900 + 0	Survey	1	1	Y	N/A	N/A

Table B-2: Summary of road restrictions (Closed - 24 hours, Closed – less than 24 hours, Speed Restrictions, and Traffic Restrictions) along the Whale Tail Haul Road, 2024

Date	Closure Status	Closure Hours	Cause for Closure / Restriction	Wildlife Observed	Number of Individuals Observed	Distance from Road	Monitoring Method	Monitoring Conducted			Reason for Re-Opening	Consultation for Re-Opening
								Viewshed Surveys	Road Surveys	Collaring Data Reviewed		
2024-12-01	Closed (< 24 hour)	15.77	Wildlife	caribou + muskox	69 + 4	500 + 25	Incidental + Survey	1	1	Y	No caribou above GST observed within 1.5 km	Daily call with GN, BL HTO, KivIA & CIRNAC - BL HTO present on the call
2024-12-02	Open	NA	NA	muskox	5	250	Survey	1	1	Y	N/A	N/A
2024-12-03	Speed Restriction	NA	Wildlife	caribou + muskox	68 + 14	600 + 1000	Survey + Viewshed	1	1	Y	N/A	N/A
2024-12-04	Open	NA	NA	muskox	4	500	Survey	0	1	Y	N/A	N/A
2024-12-05	Speed Restriction	NA	Wildlife	muskox	15	50	Incidental	1	1	Y	N/A	N/A
2024-12-06	Open	NA	NA	caribou + muskox	45 + 15	2500 + 1000	Viewshed	1	1	Y	N/A	N/A
2024-12-07	Open	NA	NA	NA	NA	NA	NA	1	1	Y	N/A	N/A
2024-12-08	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-12-09	Open	NA	NA	caribou + muskox	10 + 14	1500 + 3000	Survey + Viewshed	1	1	Y	N/A	N/A
2024-12-10	Open	NA	NA	NA	NA	NA	NA	0	1	Y	N/A	N/A
2024-12-11	Open	NA	NA	caribou + muskox	9 + 6	500 + 2500	Survey + Viewshed	1	1	Y	N/A	N/A
2024-12-12	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-12-13	Open	NA	NA	caribou + muskox	2 + 35	400 + 2000	Incidental + Viewshed	1	1	Y	N/A	N/A
2024-12-14	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A
2024-12-15	Closed (< 24 hour)	4.68	Weather	NA	NA	NA	NA	1	1	Y	Weather conditions improved	N/A
2024-12-16	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-17	Open	NA	NA	caribou	4	300	Incidental	0	1	Y	N/A	N/A - Outside of sensitive season
2024-12-18	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-19	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-20	Speed Restriction	NA	Wildlife	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-21	Speed Restriction	NA	Wildlife	muskox	36	500	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-12-22	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-23	Open	NA	NA	caribou + muskox	11 + 16	800 + 2000	Incidental + Viewshed	1	1	Y	N/A	N/A - Outside of sensitive season
2024-12-24	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-25	Closed (< 24 hour)	7.35	Weather	NA	NA	NA	NA	0	0	N	N/A	N/A - Outside of sensitive season
2024-12-26	Closed (< 24 hour)	10.12	Weather	NA	NA	NA	NA	0	0	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-12-27	Open	NA	NA	muskox	5	800	Survey	0	1	N	NA	N/A - Outside of sensitive season
2024-12-28	Open	NA	NA	NA	NA	NA	NA	0	0	Y	N/A	N/A - Outside of sensitive season
2024-12-29	Open	NA	NA	muskox	6	700	Survey	0	1	Y	N/A	N/A - Outside of sensitive season
2024-12-30	Restricted Access	NA	Weather	NA	NA	NA	NA	0	1	Y	Weather conditions improved	N/A - Outside of sensitive season
2024-12-31	Closed (< 24 hour)	0.05	Weather	muskox	16	1100	Viewshed	1	1	Y	N/A	N/A - Outside of sensitive season

APPENDIX C

Wildlife Mortalities

Wildlife Incident Report Form

Date:	2023-01-05	**Time:**	4:00AM
Individuals involved:	Douglas Wark (Agnico)	Rowan Woodall (Agnico)	Derek Nateela (Agnico)
Species:	Caribou		
Number, gender, age:	1 young Adult, Female		
Location (description):	2m from the road at KM 92 East side		
Location (UTM):	14W 630911 7209697		
Digital photo numbers:	IMG_9730	IMG_9731	IMG_9734
	IMG_9738		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

While travelling back to meadowbank near the end of their shift, the grader operator observed a caribou carcass ~2m from the road being eaten by wolves. The operator reported this to their supervisor who contacted the Environment Department. The Agnico Environment team was sent to investigate and collect the carcass at ~7:30am. The road has been closed since 10:40PM on Jan. 4th due to poor weather conditions with road maintenance focused on the southern portion of the road. There were no reports of wildlife incidents to Agnico. Further investigation is ongoing.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

No deterrents were required.

Describe any communication with GN-DOE:

GN-DoE Russel Toolooktook was notified by Rowan Woodall at 9:30am. A plan to transport the carcass to Baker Lake will be made on Monday, Jan. 8th when the conservation officers are back to work.

Wildlife mortality report was sent to GN-DOE Via Email on Jan. 5th, 2024.

What immediate measures were taken to reduce risk or harm?

The carcass was collected to reduce the risk of scavenging. The carcass will be stored in a closed seacan at Meadowbank until such time as the carcass can be transported to Baker Lake.

What measures are recommended to prevent future occurrences?

N/A

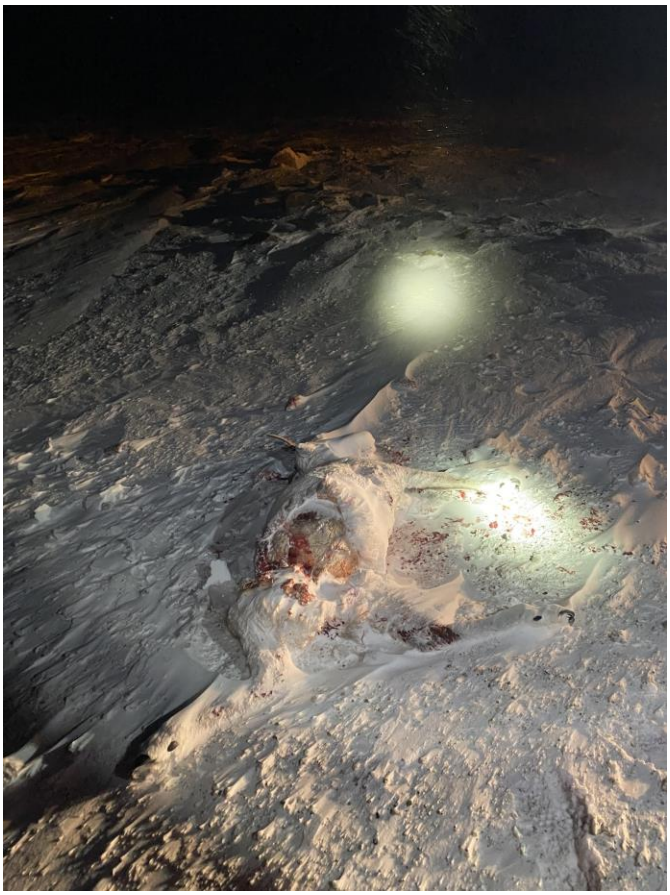
Report prepared by:	Rowan Woodall	**Reviewed by:**	Rowan Woodall



IMG_9730



IMG_9731



IMG_9734



IMG_9738

Wildlife Incident Report Form

Date:	2024-07-08	**Time:**	12:30pm
Individuals involved:	Eric Leonard (MBK Environment)	Lili Jodoin (MBK Environment	
Species:	Arctic Fox		
Number, gender, age:	Female, adult		
Location (description):	North side of the bridge km 48		
Location (UTM):	14W 625555 7173775		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a routine trip to Baker Lake, an arctic fox carcass was observed in the middle of the roadway at km 48. No predator tracks were found in the area, and there was no blood between the road and the carcass. Based on the field observations during the investigation, it appears that the fox was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on July 10th ±7H30 AM.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Eric Leonard	**Reviewed by:**	Samuel Tapp





Wildlife Incident Report Form

Date:	2024-08-04	**Time:**	8:44
Individuals involved:	Ella Stables		
Species:	Arctic Fox		
Number, gender, age:	1 female, pup		
Location (description):	Edge of the east side of the road at km 102, slightly south of the km 103 marker		
Location (UTM):	14W 635718.12 7216974.5		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a routine trip to the km 87, an arctic fox carcass was observed on the east side of the road at km 102. No predator tracks were found in the area. Based on the field observations during the investigation, it appears that the fox was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on August 5th ±8H00 AM.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Ella Stables	**Reviewed by:**	Samuel Tapp







Wildlife Incident Report Form

Date:	2024-08-06	**Time:**	11:29
Individuals involved:	Ella Stables		
Species:	Arctic Hare		
Number, gender, age:	-		
Location (description):			
Location (UTM):			
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a routine trip to Baker Lake, an arctic hare carcass was observed on the west side of the roadway at km 35. No predator tracks were found in the area but a seagull was observed on site upon arrival. Based on the field observations during the investigation, it appears that the hare was run over by a vehicle and then eaten by predators.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Ella Stables	**Reviewed by:**	







Wildlife Incident Report Form

Date:	2024-08-06	**Time:**	10:10
Individuals involved:	Ella Stables		
Species:	Arctic Hare		
Number, gender, age:	1 adult		
Location (description):	20m south of the km 87 sump		
Location (UTM):	14W 630083.32 7206029.89		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a routine trip to Baker Lake, an arctic hare carcass was observed in the middle of the roadway at km 87. No predator tracks were found in the area. Based on the field observations during the investigation, it appears that the hare was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Ella Stables	**Reviewed by:**	















Wildlife Incident Report Form

Date:	2024-08-07	**Time:**	19:43
Individuals involved:	Ella Stables	Hughes Deglaire	
Species:	Arctic Fox		
Number, gender, age:	1, pup		
Location (description):	Km 116		
Location (UTM):	14W 639084 7221030		
Digital photo numbers:	See photos below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a routine trip from Amaruq to Meadowbank, an arctic fox carcass was observed on the west side of the roadway at km 116. Based on the field observations during the investigation, it appears that the fox was run over by a vehicle and then eaten by predators.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on August 8th ±10H00 AM.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Ella Stables	**Reviewed by:**	Rowan Woodall







Wildlife Incident Report Form

Date:	2024-08-09	**Time:**	11:14
Individuals involved:	Sarah Swiderski		
Species:	Artic Fox		
Number, gender, age:	1, adult		
Location (description):	KM 98		
Location (UTM):	14W 0633906 7215212		
Digital photo numbers:	See photos below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a trip from Meadowbank to KM87, an artic fox carcass was observed on the east side of the roadway at KM 98. Based on the field observations during the investigation, it appears that the fox was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on August 9th ±7H30 PM.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Sarah Swiderski	**Reviewed by:**	Rowan Woodall





Wildlife Incident Report Form

Date:	2024-08-20	**Time:**	8:54
Individuals involved:	Jessica Crook & Lilli Jodoin		
Species:	Artic Hare		
Number, gender, age:	1, adult		
Location (description):	KM 89		
Location (UTM):	-96.0695745166667 65.0218505859375		
Digital photo numbers:	See photos below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a trip from Meadowbank to Baker Lake, an artic hare carcass was observed on the east side of the roadway at KM 89. Based on the field observations during the investigation, it appears that the hare was run over by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, to allow them to stop for wildlife and to always prioritize wildlife safety.

Report prepared by:	Jessica Crook	**Reviewed by:**	



Figure 1



Figure 2

Wildlife Incident Report Form

Date:	2024-08-23	**Time:**	13:30
Individuals involved:	Eric Leonard	Samuel Tapp	Cam Port
Species:	Siksik		
Number, gender, age:	1, adult		
Location (description):	KM104 EMR hill		
Location (UTM):			
Digital photo numbers:	No photo taken		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a drivers roadtest from Meadowbank to EMR, an Siksik fox carcass was observed on the east side of the roadway at KM104. Based on the field observations during the investigation, it appears that the Siksik was run over by a vehicle going up the blind hill toward EMR.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, to allow them to stop for wildlife and to always prioritize wildlife safety.

Report prepared by:	Eric Leonard	**Reviewed by:**	

Wildlife Incident Report Form

Date:	2024-09-06	**Time:**	02:53
Individuals involved:	Felix Quessy Savard	Tom Thomson	
Species:	Black Scoter		
Number, gender, age:	6		
Location (description):	Mill area		
Location (UTM):	14W 0637994 7213952		
Digital photo numbers:	See photos below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

On the morning of September 6th, a small group of birds flew into the side of the Mill building in between Mill Door B and Mill Door C.

1 of the birds was able to fly away after contacting the building, however the other 6 birds did not survive. AEM Environment is uncertain of the exact species of the birds but believe they are a Black Scoter Duck. The bird carcasses have been frozen and remain available for further analysis if needed.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

None.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff.

What measures are recommended to prevent future occurrences?

None

Report prepared by:	Tom Thomson	**Reviewed by:**	



2024-09-06 (1)



2024-09-06 (2)



2024-09-06 (3)



2024-09-06 (4)

Wildlife Incident Report Form

Date:	2024-10-14	**Time:**	10:24
Individuals involved:	Jessica. C & Renee. P		
Species:	Arctic Fox		
Number, gender, age:	1 female, adult		
Location (description):	Middle of the road km 18, too badly run over to determine direction		
Location (UTM):	14W 640342.72 7151434.87		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During a routine trip to Baker Lake, an arctic fox carcass was observed in the middle of the road at km 18. No predator tracks were found in the area. Based on the field observations during the investigation, it appears that the fox was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on October 15, 2024.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to site for disposal.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Jessica Crook	**Reviewed by:**	Rowan Woodall



Wildlife Incident Report Form

Date:	2024-11-16	**Time:**	6:40am
Individuals involved:	S.Tapp & G. Baril		
Species:	Wolverine		
Number, gender, age:	1 Adult		
Location (description):	Middle of the road km 135		
Location (UTM):	14W 630654.48 7234573.25		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

The road dispatch called the environment coordinator to report a wolverine carcass in the middle of the Whale Tail Haul Road at km 135. No predator tracks were found in the area. Based on the field observations during the investigation, it appears that the wolverine was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None

Describe any communication with GN-DOE:

GN-DOE was notified by phone at 8:40am and e-mail on November 16, 2024.

What immediate measures were taken to reduce risk or harm?

The carcass was collected by Environment staff and transported back to GN-DOE in Baker Lake

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Samuel Tapp	**Reviewed by:**	N/A



Wildlife Incident Report Form

Date:	2024-11-21	**Time:**	21:22
Individuals involved:	Jeremy Cousin	Laurence Archambault	Samuel Tapp
Species:	Artic Hare		
Number, gender, age:	1, gender and age unknown		
Location (description):	KM 127.5 on the WTHR		
Location (UTM):	14W 634673 7228701		
Digital photo numbers:			

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

The road dispatch emailed the environment department to report a collision between an LHT and an arctic hare on the Whale Tail Haul Road at km 127.5. No predator tracks were found in the area. No trace of the accident was found by the time an environmental employee was able to reach and access the area.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

GN-DOE was notified by phone at 8:40am and e-mail on November 21, 2024.

What immediate measures were taken to reduce risk or harm?

N/A

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Laurence Archambault	**Reviewed by:**	

Wildlife Incident Report Form

Date:	2024-11-26	**Time:**	9:45
Individuals involved:	Nicholas Andreotte	Laurence Archambault	
Species:	Arctic Fox		
Number, gender, age:	1, gender and age unknown		
Location (description):	KM 163 on the WTHR		
Location (UTM):	14W 618431 7246966		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During travel from Whale Tail Mine site to Meadowbank mine site, a road user reported a carcass was in the middle of the road between km 164-163. Upon arrival, the environmental technicians confirmed it to be an adult arctic fox. No predator tracks were found in the area. Based on the field observations during the investigation and the location of the carcass, it appears that the fox was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

GN-DOE was notified by phone at 10:50 AM on November 27th and e-mail on November 27th at 1:45pm

What immediate measures were taken to reduce risk or harm?

Carcass was removed from the road and a grader was called to scrape the area as much as possible to avoid attracting scavengers.

What measures are recommended to prevent future occurrences?

Road users were reminded to respect speed limits, allowing them to stop for wildlife and prioritize wildlife safety at all times.

Report prepared by:	Laurence Archambault	**Reviewed by:**	Rowan Woodall





Wildlife Incident Report Form

Date:	2024-12-15	**Time:**	7:30
Individuals involved:	Nicholas Andreotte	Guillaume Baril	
Species:	Arctic Fox		
Number, gender, age:	1, gender and age unknown		
Location (description):	Whale Tail ring road, in front of Pad E entrance		
Location (UTM):	14W 606648 7254801		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

Pit supervisor called the Environment Department on Dec15th, 6:30am to report a carcass on the WT ring road that was reported to him during the night shift. Upon arrival, the environmental technicians confirmed it to be an adult arctic fox. No predator tracks were found in the area. Based on the field observations during the investigation and the location of the carcass, it appears that the fox was struck by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on December 15th at 5:45pm.

What immediate measures were taken to reduce risk or harm?

Carcass and remains were removed from the road to avoid attracting scavengers.

What measures are recommended to prevent future occurrences?

Pit Operations were reminded to respect speed limits, allowing them to stop for wildlife and always prioritize wildlife safety during their safety meeting that same morning.

Report prepared by:	Guillaume Baril	**Reviewed by:**	Rowan Woodall



Wildlife Incident Report Form

Date:	2024-12-19	**Time:**	12:22
Individuals involved:	Thomas Dahm		
Species:	Arctic Hare		
Number, gender, age:	1, Adult		
Location (description):	AWAR Bridge # 2 KM17.5		
Location (UTM):	14W 0640348 7151109		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During wildlife monitoring along the All-Weather Access Road from Meadowbank to Baker Lake, an arctic hare carcass was observed in the middle of the road on Bridge #2. Based on the field observations, it appears that the hare was run over by a vehicle.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on December 21st, 2024, via email

What immediate measures were taken to reduce risk or harm?

Carcass and remains were removed from the road to avoid attracting scavengers.

What measures are recommended to prevent future occurrences?

N/A

Report prepared by:	Thomas Dahm	**Reviewed by:**	Tom Thomson





Wildlife Incident Report Form

Date:	2024-12-24	**Time:**	10:40
Individuals involved:	Tom Thomson	Laurence Archambault	Nicholas Andreotte
Species:	Arctic Fox		
Number, gender, age:	1, Adult		
Location (description):	WTHR – KM 168		
Location (UTM):	14W 0614718 7248323		
Digital photo numbers:	See below		

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

During operations at Meadowbank, Environment was contacted by dispatch to advise them of a dead fox at KM168 on the Whale Tail Haul Road. Environment technicians responded to the call and observed a pool of blood on the road at KM168. The remnants of the fox carcass were observed approximately 150m south of the incident. The carcass remains were immediately removed from the road by AEM Environment to avoid attracting scavengers. Due to the presence of blood and location on the road, the mortality appears to be project related.

Describe any use of wildlife deterrents: Describe any wildlife mortality:

None.

Describe any communication with GN-DOE:

GN-DOE was notified by e-mail on December 24th via email

What immediate measures were taken to reduce risk or harm?

Carcass and remains were removed from the road to avoid attracting scavengers.

What measures are recommended to prevent future occurrences?

N/A

Report prepared by:	Laurence Archambault	**Reviewed by:**	Tom Thomson


2024/12/24 10:44


2024/12/24 10:58

APPENDIX D

Exemption Permits

ᑲᑎᒪᔨᑦ ᓄᓇᕗᑦ ᐱᑭᓐᓯᓪᓗᒍᓯᖏᑦ
Building Nunavut Together
Nunavuliuqatigiingniq
Bâtir le Nunavut ensemble

ᐊᐃᖏᒋᓕᕆᔨᒃᑯᑦ
Department of Environment
Avatiliqiyikkut
Ministère de l'Environnement

Agnico Eagle Mines Limited - Meadowbank Division
Suite 540
Baker Lake, NU
X0C 0A0

April 12, 2024

RE: **Exemption Permit to remove/destroy ravens nets from April 12, 2024, until June 30, 2024**

Dear Agnico Eagle Mines,

As per the notification from the Agnico Eagle Mines Limited, it is being requested for permission to remove/destroy a raven's nest that are interfering with fuel tanks at the mine site near Baker Lake, Nunavut.

I authorize the removal/destruction of the nest and the eggs by Agnico Eagle Environmental staff under the supervision of a Conservation Officer. If a Conservation Officer is not available, I request that detailed pictures and notes be submitted to a Conservation Officer after the removal. This authorization of nets removal/ destruction will cover the time span from **April 12, 2024, to June 30, 2024.**

Ravens and their nets are by law protected. Specifically, by section 72 of the Nunavut Wildlife Act, which states:

> *Bird's Eggs*
> *72. (1) Unless lawfully harvesting eggs, no person shall injure, molest or destroy an egg of a bird. Bird's nests*
>
> *Bird's Nest*
> *72. (2) Unless lawfully harvesting down, no person shall injure, molest or destroy*
> *(a) the nest of a bird when the nest is occupied by a bird or its egg; or*
> *(b) the nest of any bird of prey or prescribed bird.*

Also, pursuant to the prescribed matter regulations, ravens are a prescribed bird for the purposes of Section 72(2)(b) of the *Wildlife Act*.

Therefore:

- pursuant to section 72(1) of the *Wildlife Act* it is an offence to injure, molest or destroy a raven egg; and
- pursuant to section 72(2)(a) of the *Wildlife Act* it is an offence to injure, molest or destroy an occupied raven nest; and
- pursuant to Section 72(2)(b) of the *Wildlife Act* it is an offence to injure, molest or destroy an occupied raven nest.

P.O. Box 1000.stn, 1320
Iqaluit, NU
X0A 0H0
867-975-7780

ᑲᑎᒪᔨᑦ ᓄᓇᕗᑦ ᐱᑭᓐᓇᐅᑎᓪᓗᒍᑦ
Building Nunavut Together
Nunavuliuqatigiingniq
Bâtir le Nunavut ensemble

ᐊᐃᖏᑦᑕᓱᓕᕆᔨᒃᑯᑦ
Department of Environment
Avatiliqiyikkut
Ministère de l'Environnement

This letter constitutes an **Exemption Permit**, issued under the authority of Article 5.3.24 of the Nunavut Land Claim Agreement and Section 21 of the Nunavut Wildlife Act, it exempts you from the above listed prohibitions.

You are hereby authorized to remove and/or destroy the nest and any eggs that may be in it from April 12, 2024, to June 30, 2024. If the adult birds are present and create a hazard in your attempts to carry out the removal of the nest, you are further authorized to deter the adults.

If you have any questions regarding this permit or require further advice on how to proceed under this Permit, please contact Conservation Officer Brad McInnes at 867-793-2940 or at Bmcinnes@gov.nu.ca

Sincerely,



Drikus Gissing
Superintendent of Wildlife

cc. Brad McInnes, Conservation Officer lll, Baker Lake
Russell Toolooktook, Conservation Officer II, Baker Lake
Joe Savikataaq Jr, A/ Kivalliq Regional Wildlife Manager, Arviat
Jon Neely, A/ Director of Wildlife Operations, Iqaluit

P.O. Box 1000.stn, 1320
Iqaluit, NU
X0A 0H0
867-975-7780

ᐊᐃᑎᓕᓭᐅᑦ

Avatiligiyiit

Department of Environment

Ministère de l'Environnement

Wildlife Destruction Authorization Form

In accordance with section 25 of the *Wildlife Act*,

I, Bradley McInnes, a Conservation Officer in Nunavut,

authorize AEM Environmental Tech of Agnico Eagle Mine,

(Name of Person) (Address of Person)

to destroy the following wildlife:

Species: 2 Wolves

Location: Meadowbank

Reason wildlife is to be destroyed: 2 wolves in camp

Equipment to be used to destroy the wildlife: Firearm

Officer Signature

Conservation Officer III

Position

December 17, 2024.

Date

APPENDIX E

Helicopter Flights

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Spring	FNDN	2024-04-24	736924	1	Move	Slinging	Yes	Yes	Slinging	221.2
Short-Range	Spring	FNDN	2024-04-24	736924	2	Move	Slinging	Yes	Yes	Slinging	187.7
Short-Range	Spring	FNDN	2024-04-26	737869	1	Move	Slinging	Yes	Yes	Slinging	168.6
Short-Range	Spring	FNDN	2024-04-27	738112	1	Move	Slinging	Yes	Yes	Slinging	175.4
Short-Range	Spring	FNDN	2024-04-27	738112	2	Move	Slinging	Yes	Yes	Slinging	158.0
Short-Range	Spring	FNDN	2024-04-27	738112	3	Move	Slinging	Yes	Yes	Slinging	181.9
Short-Range	Spring	FNDN	2024-04-27	738112	4	Move	Slinging	Yes	Yes	Slinging	139.4
Short-Range	Spring	FNDN	2024-04-28	738367	1	PaxLoc	Passenger	Yes	Yes	Weather	158.1
Short-Range	Spring	FNDN	2024-04-29	738739	1	Move	Slinging	Yes	Yes	Slinging	160.0
Short-Range	Spring	FNDN	2024-04-29	738739	2	Move	Slinging	Yes	Yes	Slinging	162.4
Short-Range	Spring	FNDN	2024-04-29	738739	3	Move	Slinging	Yes	Yes	Slinging	166.7
Short-Range	Spring	FNDN	2024-04-29	738739	4	Move	Slinging	Yes	Yes	Slinging	178.4
Short-Range	Spring	FNDN	2024-04-29	738739	5	Move	Slinging	Yes	Yes	Slinging	158.9
Short-Range	Spring	FNDN	2024-04-29	738739	6	Move	Slinging	Yes	Yes	Slinging	168.3
Short-Range	Spring	FNDN	2024-04-29	738739	7	Move	Slinging	Yes	Yes	Slinging	171.8
Short-Range	Spring	FNDN	2024-04-29	738739	8	PaxLoc	Passenger	No	No	No Reason	316.7
Short-Range	Spring	FNDN	2024-04-29	738739	9	PaxLoc	Passenger	No	Yes	No Reason	192.1
Short-Range	Spring	FNDN	2024-04-30	739201	1	CrewChg	Passenger	Yes	Yes	Weather	173.9
Short-Range	Spring	FNDN	2024-04-30	739201	3	CrewChg	Passenger	No	Yes	No Reason	268.3
Short-Range	Spring	FNDN	2024-05-01	739576	1	PaxLoc	Passenger	Yes	Yes	Weather	102.2
Short-Range	Spring	FNDN	2024-05-01	739576	2	PaxLoc	Passenger	Yes	Yes	Weather	127.5
Short-Range	Spring	FNDN	2024-05-02	740092	1	CrewChg	Passenger	Yes	Yes	Weather	131.1
Short-Range	Spring	FNDN	2024-05-02	740092	2	Fuel	Slinging	Yes	Yes	Slinging	152.1
Short-Range	Spring	FNDN	2024-05-02	740092	3	Floor	Slinging	Yes	Yes	Slinging	139.7
Short-Range	Spring	FNDN	2024-05-02	740092	4	Floor	Slinging	Yes	Yes	Slinging	130.4
Short-Range	Spring	FNDN	2024-05-02	740092	5	CrewChg	Passenger	No	Yes	No Reason	236.4
Short-Range	Spring	FNDN	2024-05-03	740433	1	Core	Slinging	Yes	Yes	Slinging	168.0
Short-Range	Spring	FNDN	2024-05-03	740433	2	Fuel	Slinging	Yes	Yes	Slinging	167.7
Short-Range	Spring	FNDN	2024-05-03	740433	3	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-03	740433	4	Floor	Slinging	Yes	Yes	Slinging	127.5
Short-Range	Spring	FNDN	2024-05-03	740433	6	CrewChg	Passenger	No	Yes	No Reason	288.2
Short-Range	Spring	FNDN	2024-05-04	740811	1	CrewChg	Passenger	Yes	Yes	Weather	72.3
Short-Range	Spring	FNDN	2024-05-04	740811	2	PaxLoc	Passenger	Yes	No	Weather	303.2
Short-Range	Spring	FNDN	2024-05-04	740811	3	PaxLoc	Passenger	Yes	Yes	Weather	193.4
Short-Range	Spring	FNDN	2024-05-04	740811	5	Core	Slinging	Yes	Yes	Slinging	186.0
Short-Range	Spring	FNDN	2024-05-04	740811	6	PaxLoc	Passenger	No	Yes	No Reason	295.0
Short-Range	Spring	FNDN	2024-05-05	741072	1	PaxLoc	Passenger	No	Yes	No Reason	287.1
Short-Range	Spring	FNDN	2024-05-05	741072	2	Move	Slinging	Yes	Yes	Slinging	95.2
Short-Range	Spring	FNDN	2024-05-05	741072	3	Move	Slinging	Yes	Yes	Slinging	99.7
Short-Range	Spring	FNDN	2024-05-05	741072	4	Move	Slinging	Yes	Yes	Slinging	100.1
Short-Range	Spring	FNDN	2024-05-05	741072	5	Move	Slinging	Yes	Yes	Slinging	117.8
Short-Range	Spring	FNDN	2024-05-05	741072	6	Floor	Slinging	Yes	Yes	Slinging	261.7
Short-Range	Spring	FNDN	2024-05-05	741072	7	PaxLoc	Passenger	Yes	Yes	Weather	163.7
Short-Range	Spring	FNDN	2024-05-05	741072	8	PaxLoc	Passenger	Yes	Yes	Weather	124.7
Short-Range	Spring	FNDN	2024-05-05	741072	9	CrewChg	Passenger	Yes	Yes	Weather	130.8
Short-Range	Spring	FNDN	2024-05-06	741495	1	CrewChg	Passenger	Yes	Yes	Weather	42.5
Short-Range	Spring	FNDN	2024-05-06	741495	3	PaxLoc	Passenger	Yes	Yes	Weather	112.9
Short-Range	Spring	FNDN	2024-05-06	741495	4	PaxLoc	Passenger	Yes	Yes	Weather	142.0
Short-Range	Spring	FNDN	2024-05-06	741495	5	Core	Slinging	Yes	Yes	Slinging	144.6
Short-Range	Spring	FNDN	2024-05-06	741495	6	CrewChg	Passenger	Yes	Yes	Weather	115.1
Short-Range	Spring	FNDN	2024-05-07	742023	1	Core	Slinging	Yes	Yes	Slinging	189.1
Short-Range	Spring	FNDN	2024-05-07	742023	3	Fuel	Slinging	Yes	Yes	Slinging	170.7
Short-Range	Spring	FNDN	2024-05-07	742023	4	DrillServ	Slinging	Yes	Yes	Slinging	176.3

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Spring	FNDN	2024-05-07	742023	5	Move	Slinging	Yes	Yes	Slinging	195.7
Short-Range	Spring	FNDN	2024-05-07	742023	6	Move	Slinging	Yes	Yes	Slinging	93.4
Short-Range	Spring	FNDN	2024-05-07	742023	7	Move	Slinging	Yes	Yes	Slinging	106.6
Short-Range	Spring	FNDN	2024-05-07	742023	8	CrewChg	Passenger	No	Yes	No Reason	137.9
Short-Range	Spring	FNDN	2024-05-08	742437	1	PaxLoc	Passenger	No	Yes	No Reason	159.6
Short-Range	Spring	FNDN	2024-05-08	742437	2	Floor	Slinging	Yes	Yes	Slinging	79.6
Short-Range	Spring	FNDN	2024-05-08	742437	3	Floor	Slinging	Yes	Yes	Slinging	117.9
Short-Range	Spring	FNDN	2024-05-08	742437	4	Floor	Slinging	Yes	Yes	Slinging	117.6
Short-Range	Spring	FNDN	2024-05-08	742437	6	Core	Slinging	Yes	Yes	Slinging	164.5
Short-Range	Spring	FNDN	2024-05-08	742437	8	DrillServ	Slinging	Yes	Yes	Slinging	148.2
Short-Range	Spring	FNDN	2024-05-08	742437	9	CrewChg	Passenger	Yes	Yes	Weather	74.6
Short-Range	Spring	FNDN	2024-05-09	742905	1	CrewChg	Passenger	Yes	Yes	Weather	55.2
Short-Range	Spring	FNDN	2024-05-09	742905	2	Reposition	Slinging	Yes	Yes	Slinging	21.2
Short-Range	Spring	FNDN	2024-05-09	742905	3	Core	Slinging	Yes	Yes	Slinging	145.3
Short-Range	Spring	FNDN	2024-05-10	743328	1	PaxLoc	Passenger	Yes	Yes	Weather	132.1
Short-Range	Spring	FNDN	2024-05-10	743328	2	Move	Slinging	Yes	Yes	Slinging	114.1
Short-Range	Spring	FNDN	2024-05-10	743328	3	Move	Slinging	Yes	Yes	Slinging	111.3
Short-Range	Spring	FNDN	2024-05-10	743328	4	Move	Slinging	Yes	Yes	Slinging	106.2
Short-Range	Spring	FNDN	2024-05-11	743698	1	CrewChg	Passenger	No	Yes	No Reason	140.2
Short-Range	Spring	FNDN	2024-05-11	743698	2	PaxLoc	Passenger	No	Yes	No Reason	98.5
Short-Range	Spring	FNDN	2024-05-11	743698	3	LocSlng	Slinging	Yes	Yes	Slinging	158.4
Short-Range	Spring	FNDN	2024-05-11	743698	4	Move	Slinging	Yes	Yes	Slinging	116.1
Short-Range	Spring	FNDN	2024-05-11	743698	6	Move	Slinging	Yes	Yes	Slinging	166.6
Short-Range	Spring	FNDN	2024-05-11	743698	7	CrewChg	Passenger	No	Yes	No Reason	116.1
Short-Range	Spring	FNDN	2024-05-12	744046	1	CrewChg	Passenger	No	Yes	No Reason	151.9
Short-Range	Spring	FNDN	2024-05-12	744046	2	Core	Slinging	Yes	Yes	Slinging	136.0
Short-Range	Spring	FNDN	2024-05-12	744046	3	Floor	Slinging	Yes	Yes	Slinging	182.1
Short-Range	Spring	FNDN	2024-05-12	744046	4	Core	Slinging	Yes	Yes	Slinging	219.5
Short-Range	Spring	FNDN	2024-05-13	744474	1	CrewChg	Passenger	No	Yes	No Reason	161.0
Short-Range	Spring	FNDN	2024-05-13	744474	2	PaxLoc	Passenger	No	Yes	No Reason	77.1
Short-Range	Spring	FNDN	2024-05-13	744474	3	Move	Slinging	Yes	Yes	Slinging	104.3
Short-Range	Spring	FNDN	2024-05-13	744474	4	Move	Slinging	Yes	Yes	Slinging	101.1
Short-Range	Spring	FNDN	2024-05-13	744474	5	Move	Slinging	Yes	Yes	Slinging	100.1
Short-Range	Spring	FNDN	2024-05-13	744474	6	DrillServ	Slinging	Yes	Yes	Slinging	156.8
Short-Range	Spring	FNDN	2024-05-13	744474	7	DrillServ	Slinging	Yes	Yes	Slinging	156.9
Short-Range	Spring	FNDN	2024-05-13	744474	8	DrillServ	Slinging	Yes	Yes	Slinging	132.8
Short-Range	Spring	FNDN	2024-05-13	744474	9	CrewChg	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-14	744935	1	CrewChg	Passenger	No	Yes	No Reason	274.1
Short-Range	Spring	FNDN	2024-05-14	744935	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-14	744935	3	Floor	Slinging	Yes	Yes	Slinging	96.5
Short-Range	Spring	FNDN	2024-05-14	744935	4	Floor	Slinging	Yes	Yes	Slinging	187.4
Short-Range	Spring	FNDN	2024-05-14	744935	5	PaxLoc	Passenger	No	Yes	No Reason	232.1
Short-Range	Spring	FNDN	2024-05-14	744935	6	PaxLoc	Passenger	No	Yes	No Reason	258.3
Short-Range	Spring	FNDN	2024-05-14	744935	7	CrewChg	Passenger	No	Yes	No Reason	250.7
Short-Range	Spring	FNDN	2024-05-15	745170	1	CrewChg	Passenger	No	Yes	No Reason	191.4
Short-Range	Spring	FNDN	2024-05-15	745170	2	DrillServ	Slinging	Yes	Yes	Slinging	184.7
Short-Range	Spring	FNDN	2024-05-15	745376	1	PaxLoc	Passenger	No	No	N/A	317.6
Short-Range	Spring	FNDN	2024-05-15	745376	2	PaxLoc	Passenger	No	Yes	No Reason	235.1
Short-Range	Spring	FNDN	2024-05-15	745376	3	Core	Slinging	Yes	Yes	Slinging	214.1
Short-Range	Spring	FNDN	2024-05-15	745376	4	CrewChg	Passenger	No	Yes	No Reason	256.6
Short-Range	Spring	FNDN	2024-05-16	745934	1	PaxLoc	Passenger	Yes	Yes	Weather	101.8
Short-Range	Spring	FNDN	2024-05-17	746422	1	Reposition	Slinging	Yes	Yes	Slinging	99.3

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Spring	FNDN	2024-05-18	746843	1	Reposition	Slinging	Yes	Yes	Slinging	74.9
Short-Range	Spring	FNDN	2024-05-19	747239	1	PaxLoc	Passenger	No	Yes	No Reason	180.6
Short-Range	Spring	FNDN	2024-05-19	747239	2	Move	Slinging	Yes	Yes	Slinging	145.9
Short-Range	Spring	FNDN	2024-05-19	747239	3	Move	Slinging	Yes	Yes	Slinging	151.4
Short-Range	Spring	FNDN	2024-05-19	747239	4	Floor	Slinging	Yes	Yes	Slinging	296.8
Short-Range	Spring	FNDN	2024-05-19	747239	5	Reposition	Slinging	Yes	Yes	Slinging	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-19	747239	6	DrillServ	Slinging	Yes	Yes	Slinging	224.0
Short-Range	Spring	FNDN	2024-05-19	747239	7	PaxLoc	Passenger	No	Yes	No Reason	250.8
Short-Range	Spring	FNDN	2024-05-19	747239	9	CrewChg	Passenger	No	Yes	No Reason	253.1
Short-Range	Spring	FNDN	2024-05-20	747587	1	CrewChg	Passenger	No	No	N/A	315.9
Short-Range	Spring	FNDN	2024-05-20	747587	2	PaxLoc	Passenger	No	No	N/A	355.8
Short-Range	Spring	FNDN	2024-05-20	747587	3	PaxLoc	Passenger	No	No	N/A	482.1
Short-Range	Spring	FNDN	2024-05-20	747587	4	Move	Slinging	Yes	Yes	Slinging	138.3
Short-Range	Spring	FNDN	2024-05-20	747587	5	Move	Slinging	Yes	Yes	Slinging	190.2
Short-Range	Spring	FNDN	2024-05-20	747587	6	CrewChg	Passenger	No	Yes	No Reason	287.6
Short-Range	Spring	FNDN	2024-05-21	748110	1	CrewChg	Passenger	No	No	N/A	318.0
Short-Range	Spring	FNDN	2024-05-21	748110	2	Floor	Slinging	Yes	Yes	Slinging	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-21	748110	3	CrewChg	Passenger	No	Yes	No Reason	279.4
Short-Range	Spring	FNDN	2024-05-21	748110	4	Floor	Slinging	Yes	Yes	Slinging	134.2
Short-Range	Spring	FNDN	2024-05-21	748110	5	DrillServ	Slinging	Yes	Yes	Slinging	214.3
Short-Range	Spring	FNDN	2024-05-21	748110	6	DrillServ	Slinging	Yes	Yes	Slinging	266.9
Short-Range	Spring	FNDN	2024-05-21	748110	7	PaxLoc	Passenger	No	No	N/A	302.5
Short-Range	Spring	FNDN	2024-05-21	748110	8	PaxLoc	Passenger	No	Yes	No Reason	266.6
Short-Range	Spring	FNDN	2024-05-21	748110	9	PaxLoc	Passenger	No	Yes	No Reason	214.8
Short-Range	Spring	FNDN	2024-05-22	748619	1	CrewChg	Passenger	No	Yes	No Reason	280.6
Short-Range	Spring	FNDN	2024-05-22	748619	2	DrillServ	Slinging	Yes	Yes	Slinging	285.6
Short-Range	Spring	FNDN	2024-05-22	748619	3	PaxLoc	Passenger	No	Yes	No Reason	203.4
Short-Range	Spring	FNDN	2024-05-22	748619	4	PaxLoc	Passenger	No	Yes	No Reason	283.5
Short-Range	Spring	FNDN	2024-05-22	748619	5	Core	Slinging	Yes	Yes	Slinging	169.0
Short-Range	Spring	FNDN	2024-05-22	748619	6	Move	Slinging	Yes	Yes	Slinging	190.4
Short-Range	Spring	FNDN	2024-05-22	748619	7	DrillServ	Slinging	Yes	Yes	Slinging	209.9
Short-Range	Spring	FNDN	2024-05-22	748619	8	DrillServ	Slinging	Yes	Yes	Slinging	221.6
Short-Range	Spring	FNDN	2024-05-22	748619	9	PaxLoc	Passenger	No	No	N/A	321.1
Short-Range	Spring	FNDN	2024-05-22	748619	10	CrewChg	Passenger	No	Yes	No Reason	281.9
Short-Range	Spring	FNDN	2024-05-23	749224	1	CrewChg	Passenger	No	Yes	No Reason	260.6
Short-Range	Spring	FNDN	2024-05-23	749224	5	Pax	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-23	749224	6	PaxLoc	Passenger	No	Yes	No Reason	175.5
Short-Range	Spring	FNDN	2024-05-23	749224	7	Floor	Slinging	Yes	Yes	Slinging	150.1
Short-Range	Spring	FNDN	2024-05-23	749224	8	PaxLoc	Passenger	No	Yes	No Reason	198.7
Short-Range	Spring	FNDN	2024-05-23	749224	9	CrewChg	Passenger	No	Yes	No Reason	277.5
Short-Range	Spring	FNDN	2024-05-24	749761	1	CrewChg	Passenger	No	Yes	No Reason	218.5
Short-Range	Spring	FNDN	2024-05-24	749761	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-24	749761	3	Move	Slinging	Yes	Yes	Slinging	166.4
Short-Range	Spring	FNDN	2024-05-24	749761	4	Move	Slinging	Yes	Yes	Slinging	176.4
Short-Range	Spring	FNDN	2024-05-24	749761	5	Move	Slinging	Yes	Yes	Slinging	168.0
Short-Range	Spring	FNDN	2024-05-24	749761	6	Move	Slinging	Yes	Yes	Slinging	139.5
Short-Range	Spring	FNDN	2024-05-24	749761	7	Move	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Spring	FNDN	2024-05-24	749761	8	PaxLoc	Passenger	No	Yes	No Reason	157.2
Short-Range	Spring	FNDN	2024-05-24	749761	9	Move	Slinging	Yes	Yes	Slinging	222.2

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Spring	FNDN	2024-05-24	749761	10	Floor	Slinging	Yes	Yes	Slinging	118.5
Short-Range	Spring	FNDN	2024-05-24	749761	11	PaxLoc	Passenger	No	Yes	No Reason	238.6
Short-Range	Spring	FNDN	2024-05-24	749761	12	PaxLoc	Passenger	No	Yes	No Reason	193.6
Short-Range	Spring	GUIT	2024-05-24	749840	3	Move	Slinging	Yes	Yes	Slinging	196.1
Short-Range	Spring	GUIT	2024-05-24	749840	4	Fuel	Slinging	Yes	Yes	Slinging	237.8
Short-Range	Spring	GUIT	2024-05-24	749840	5	Move	Slinging	Yes	Yes	Slinging	273.9
Short-Range	Spring	FNDN	2024-05-25	750138	1	CrewChg	Passenger	No	Yes	No Reason	227.5
Short-Range	Spring	FNDN	2024-05-25	750138	2	PaxLoc	Passenger	No	Yes	No Reason	237.5
Short-Range	Spring	FNDN	2024-05-25	750138	3	Floor	Slinging	Yes	Yes	Slinging	179.1
Short-Range	Spring	FNDN	2024-05-25	750138	4	Move	Slinging	Yes	Yes	Slinging	220.7
Short-Range	Spring	FNDN	2024-05-25	750138	5	Move	Slinging	Yes	Yes	Slinging	202.0
Short-Range	Spring	FNDN	2024-05-25	750138	6	Core	Slinging	Yes	Yes	Slinging	236.3
Short-Range	Spring	FNDN	2024-05-25	750138	7	DrillServ	Slinging	Yes	No	Slinging	305.5
Short-Range	Spring	FNDN	2024-05-25	750138	8	CrewChg	Passenger	No	Yes	No Reason	251.9
Short-Range	Spring	GUIT	2024-05-25	750164	2	Move	Slinging	Yes	Yes	Slinging	218.9
Short-Range	Spring	GUIT	2024-05-25	750164	3	Fuel	Slinging	Yes	Yes	Slinging	211.8
Short-Range	Spring	GUIT	2024-05-25	750164	4	PaxLoc	Passenger	No	Yes	No Reason	175.7
Short-Range	Spring	GUIT	2024-05-25	750164	5	PaxLoc	Passenger	No	No	No Reason	306.3
Short-Range	Spring	GUIT	2024-05-25	750164	6	Move	Slinging	Yes	Yes	Slinging	182.5
Short-Range	Summer	GUIT	2024-05-26	750547	2	Floor	Slinging	Yes	Yes	Slinging	177.6
Short-Range	Summer	GUIT	2024-05-26	750547	3	Floor	Slinging	Yes	Yes	Slinging	207.6
Short-Range	Summer	FNDN	2024-05-26	750567	1	CrewChg	Passenger	No	Yes	No Reason	250.9
Short-Range	Summer	FNDN	2024-05-26	750567	2	DrillServ	Slinging	Yes	Yes	Slinging	194.0
Short-Range	Summer	FNDN	2024-05-26	750567	3	PaxLoc	Passenger	No	No	N/A	338.5
Short-Range	Summer	FNDN	2024-05-26	750567	4	PaxLoc	Passenger	No	Yes	No Reason	123.1
Short-Range	Summer	FNDN	2024-05-26	750567	5	Core	Slinging	Yes	Yes	Slinging	171.9
Short-Range	Summer	FNDN	2024-05-26	750567	6	DrillServ	Slinging	Yes	Yes	Slinging	281.4
Short-Range	Summer	FNDN	2024-05-26	750567	7	CrewChg	Passenger	No	Yes	No Reason	253.3
Short-Range	Summer	FNDN	2024-05-27	751123	1	CrewChg	Passenger	No	Yes	No Reason	288.7
Short-Range	Summer	FNDN	2024-05-27	751123	2	Core	Slinging	Yes	No	Slinging	300.7
Short-Range	Summer	FNDN	2024-05-27	751123	3	PaxLoc	Passenger	No	No	N/A	335.8
Short-Range	Summer	FNDN	2024-05-27	751123	4	DrillServ	Slinging	Yes	Yes	Slinging	256.0
Short-Range	Summer	FNDN	2024-05-27	751123	5	PaxLoc	Passenger	No	Yes	No Reason	170.6
Short-Range	Summer	FNDN	2024-05-27	751123	6	Move	Slinging	Yes	Yes	Slinging	130.8
Short-Range	Summer	FNDN	2024-05-27	751123	7	PaxLoc	Passenger	No	Yes	No Reason	172.0
Short-Range	Summer	FNDN	2024-05-27	751123	8	CrewChg	Passenger	No	Yes	No Reason	277.3
Short-Range	Summer	GUIT	2024-05-28	751527	1	Fuel	Slinging	Yes	Yes	Slinging	216.5
Short-Range	Summer	GUIT	2024-05-28	751527	3	Pax	Passenger	No	Yes	Short Flight	262.3
Short-Range	Summer	GUIT	2024-05-28	751527	4	Pax	Passenger	No	Yes	Short Flight	40.1
Short-Range	Summer	GUIT	2024-05-28	751527	5	Pax	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-05-28	751527	6	CrewChg	Passenger	No	Yes	No Reason	275.7
Short-Range	Summer	FNDN	2024-05-28	751677	1	CrewChg	Passenger	No	Yes	No Reason	216.4
Short-Range	Summer	FNDN	2024-05-28	751677	2	PaxLoc	Passenger	No	Yes	No Reason	258.6
Short-Range	Summer	FNDN	2024-05-28	751677	3	Move	Slinging	Yes	Yes	Slinging	90.4
Short-Range	Summer	FNDN	2024-05-28	751677	4	Move	Slinging	Yes	Yes	Slinging	106.5
Short-Range	Summer	FNDN	2024-05-28	751677	5	Floor	Slinging	Yes	Yes	Slinging	129.3
Short-Range	Summer	FNDN	2024-05-28	751677	6	PaxLoc	Passenger	No	Yes	No Reason	295.2
Short-Range	Summer	FNDN	2024-05-28	751677	7	PaxLoc	Passenger	No	Yes	No Reason	266.6
Short-Range	Summer	FNDN	2024-05-28	751677	8	PaxLoc	Passenger	No	Yes	No Reason	217.8
Short-Range	Summer	FNDN	2024-05-28	751677	9	CrewChg	Passenger	No	Yes	No Reason	230.8
Short-Range	Summer	FNDN	2024-05-29	752188	1	CrewChg	Passenger	No	No	N/A	300.7
Short-Range	Summer	FNDN	2024-05-29	752188	2	Core	Slinging	Yes	Yes	Slinging	227.8
Short-Range	Summer	FNDN	2024-05-29	752188	3	DrillServ	Slinging	Yes	Yes	Slinging	246.2

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FNDN	2024-05-29	752188	4	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-05-29	752188	5	PaxLoc	Passenger	No	Yes	No Reason	287.0
Short-Range	Summer	FNDN	2024-05-29	752188	6	Move	Slinging	Yes	Yes	Slinging	141.0
Short-Range	Summer	FNDN	2024-05-29	752188	7	Move	Slinging	Yes	Yes	Slinging	129.8
Short-Range	Summer	FNDN	2024-05-29	752188	8	Floor	Slinging	Yes	Yes	Slinging	123.6
Short-Range	Summer	FNDN	2024-05-29	752188	9	PaxLoc	Passenger	No	Yes	No Reason	289.8
Short-Range	Summer	FNDN	2024-05-29	752188	10	CrewChg	Passenger	No	Yes	No Reason	299.6
Short-Range	Summer	GUIT	2024-05-29	752273	1	PaxLoc	Passenger	No	No	N/A	325.4
Short-Range	Summer	GUIT	2024-05-29	752273	2	PaxLoc	Passenger	No	No	N/A	324.8
Short-Range	Summer	GUIT	2024-05-29	752273	3	Move	Slinging	Yes	Yes	Slinging	122.6
Short-Range	Summer	GUIT	2024-05-29	752273	4	Move	Slinging	Yes	Yes	Slinging	227.6
Short-Range	Summer	GUIT	2024-05-29	752273	5	PaxLoc	Passenger	No	Yes	No Reason	215.3
Short-Range	Summer	GUIT	2024-05-29	752273	6	CrewChg	Passenger	No	No	N/A	323.8
Short-Range	Summer	GUIT	2024-05-30	752477	1	PaxLoc	Passenger	No	No	N/A	367.8
Short-Range	Summer	GUIT	2024-05-30	752477	3	Move	Slinging	Yes	Yes	Slinging	139.6
Short-Range	Summer	GUIT	2024-05-30	752477	4	Floor	Slinging	Yes	Yes	Slinging	142.3
Short-Range	Summer	GUIT	2024-05-30	752477	5	Floor	Slinging	Yes	No	Slinging	336.8
Short-Range	Summer	GUIT	2024-05-30	752477	6	PaxLoc	Passenger	No	No	N/A	342.3
Short-Range	Summer	GUIT	2024-05-30	752477	7	Core	Slinging	Yes	No	Slinging	320.4
Short-Range	Summer	FNDN	2024-05-30	752605	1	CrewChg	Passenger	Yes	No	Weather	328.2
Short-Range	Summer	FNDN	2024-05-30	752605	2	PaxLoc	Passenger	No	No	N/A	315.6
Short-Range	Summer	FNDN	2024-05-30	752605	3	DrillServ	Slinging	Yes	Yes	Slinging	230.5
Short-Range	Summer	FNDN	2024-05-30	752605	4	PaxLoc	Passenger	No	Yes	No Reason	195.6
Short-Range	Summer	GUIT	2024-05-31	753087	1	DrillServ	Slinging	Yes	Yes	Slinging	186.3
Short-Range	Summer	GUIT	2024-05-31	753087	2	PaxLoc	Passenger	No	Yes	No Reason	213.7
Short-Range	Summer	GUIT	2024-05-31	753087	3	PaxLoc	Passenger	No	No	N/A	324.0
Short-Range	Summer	GUIT	2024-05-31	753087	4	CrewChg	Passenger	No	No	N/A	347.1
Short-Range	Summer	FNDN	2024-05-31	753139	1	CrewChg	Passenger	No	Yes	No Reason	253.6
Short-Range	Summer	FNDN	2024-05-31	753139	2	CrewChg	Passenger	No	Yes	No Reason	239.0
Short-Range	Summer	FNDN	2024-05-31	753139	3	Core	Slinging	Yes	No	Slinging	311.1
Short-Range	Summer	FNDN	2024-05-31	753139	4	DrillServ	Slinging	Yes	Yes	Slinging	257.0
Short-Range	Summer	FNDN	2024-05-31	753139	5	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-01	753399	2	DrillServ	Slinging	Yes	Yes	Slinging	239.2
Short-Range	Summer	GUIT	2024-06-01	753399	3	DrillServ	Slinging	Yes	Yes	Slinging	98.8
Short-Range	Summer	GUIT	2024-06-01	753399	4	Move	Slinging	Yes	Yes	Slinging	134.7
Short-Range	Summer	GUIT	2024-06-01	753399	5	CrewChg	Passenger	No	Yes	No Reason	262.5
Short-Range	Summer	FNDN	2024-06-01	753504	1	CrewChg	Passenger	No	Yes	No Reason	200.7
Short-Range	Summer	FNDN	2024-06-01	753504	2	Core	Slinging	Yes	Yes	Slinging	244.9
Short-Range	Summer	FNDN	2024-06-01	753504	3	PaxLoc	Passenger	No	Yes	No Reason	253.7
Short-Range	Summer	FNDN	2024-06-01	753504	4	DrillServ	Slinging	Yes	Yes	Slinging	226.6
Short-Range	Summer	FNDN	2024-06-01	753504	5	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-02	753865	1	CrewChg	Passenger	No	No	N/A	403.4
Short-Range	Summer	FNDN	2024-06-02	753865	2	Core	Slinging	Yes	Yes	Slinging	252.9
Short-Range	Summer	FNDN	2024-06-02	753865	3	DrillServ	Slinging	Yes	Yes	Slinging	240.8
Short-Range	Summer	FNDN	2024-06-02	753865	5	Move	Slinging	Yes	Yes	Slinging	104.7
Short-Range	Summer	FNDN	2024-06-02	753865	6	PaxLoc	Passenger	No	Yes	No Reason	204.4
Short-Range	Summer	FNDN	2024-06-02	753865	7	PaxLoc	Passenger	No	Yes	No Reason	108.0
Short-Range	Summer	GUIT	2024-06-02	753890	2	PaxLoc	Passenger	No	Yes	No Reason	62.4
Short-Range	Summer	GUIT	2024-06-02	753890	3	Move	Slinging	Yes	Yes	Slinging	155.6
Short-Range	Summer	GUIT	2024-06-02	753890	4	Floor	Slinging	Yes	Yes	Slinging	214.5
Short-Range	Summer	GUIT	2024-06-02	753890	5	Core	Slinging	Yes	Yes	Slinging	291.3

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	GUIT	2024-06-02	753890	6	PaxLoc	Passenger	No	Yes	No Reason	180.9
Short-Range	Summer	GUIT	2024-06-02	753890	7	PaxLoc	Passenger	No	Yes	No Reason	102.9
Short-Range	Summer	FNDN	2024-06-03	754200	1	CrewChg	Passenger	No	No	N/A	348.0
Short-Range	Summer	FNDN	2024-06-03	754200	2	Core	Slinging	Yes	Yes	Slinging	280.1
Short-Range	Summer	FNDN	2024-06-03	754319	1	Move	Slinging	Yes	Yes	Slinging	163.9
Short-Range	Summer	FNDN	2024-06-03	754319	2	PaxLoc	Passenger	No	Yes	No Reason	257.5
Short-Range	Summer	FNDN	2024-06-03	754319	3	PaxLoc	Passenger	No	Yes	No Reason	187.3
Short-Range	Summer	GUIT	2024-06-03	754393	1	DrillServ	Slinging	Yes	Yes	Slinging	278.0
Short-Range	Summer	GUIT	2024-06-03	754393	2	Move	Slinging	Yes	Yes	Slinging	216.1
Short-Range	Summer	GUIT	2024-06-03	754393	3	Move	Slinging	Yes	Yes	Slinging	298.5
Short-Range	Summer	GUIT	2024-06-03	754393	4	Move	Slinging	Yes	Yes	Slinging	273.5
Short-Range	Summer	FNDN	2024-06-04	754624	1	CrewChg	Passenger	No	Yes	No Reason	291.1
Short-Range	Summer	FNDN	2024-06-04	754624	2	Move	Slinging	Yes	Yes	Slinging	222.2
Short-Range	Summer	FNDN	2024-06-04	754624	3	Move	Slinging	Yes	Yes	Slinging	175.2
Short-Range	Summer	FNDN	2024-06-04	754624	4	PaxLoc	Passenger	No	No	No Reason	373.6
Short-Range	Summer	FNDN	2024-06-04	754624	5	PaxLoc	Passenger	No	No	No Reason	374.7
Short-Range	Summer	GUIT	2024-06-04	754847	1	Move	Slinging	Yes	Yes	Slinging	271.7
Short-Range	Summer	GUIT	2024-06-04	754847	2	Move	Slinging	Yes	Yes	Slinging	288.0
Short-Range	Summer	GUIT	2024-06-04	754847	3	DrillServ	Slinging	Yes	Yes	Slinging	241.8
Short-Range	Summer	GUIT	2024-06-04	754847	4	DrillServ	Slinging	Yes	Yes	Slinging	279.5
Short-Range	Summer	FNDN	2024-06-05	755252	1	Core	Slinging	Yes	Yes	Slinging	177.8
Short-Range	Summer	FNDN	2024-06-05	755252	2	PaxLoc	Passenger	No	Yes	No Reason	279.6
Short-Range	Summer	FNDN	2024-06-05	755252	3	PaxLoc	Passenger	No	Yes	No Reason	147.6
Short-Range	Summer	GUIT	2024-06-05	755284	2	PaxLoc	Passenger	No	No	N/A	350.6
Short-Range	Summer	GUIT	2024-06-05	755284	3	DrillServ	Slinging	Yes	Yes	Slinging	106.9
Short-Range	Summer	GUIT	2024-06-05	755284	4	PaxLoc	Passenger	No	Yes	Short Flight	102.9
Short-Range	Summer	GUIT	2024-06-05	755284	6	CrewChg	Passenger	No	Yes	No Reason	244.1
Short-Range	Summer	GUIT	2024-06-05	755284	9	PaxLoc	Passenger	No	No	N/A	314.9
Short-Range	Summer	FNDN	2024-06-06	755690	1	CrewChg	Passenger	No	No	No Reason	432.2
Short-Range	Summer	FNDN	2024-06-06	755690	2	DrillServ	Slinging	Yes	Yes	Slinging	175.3
Short-Range	Summer	FNDN	2024-06-06	755690	3	DrillServ	Slinging	Yes	Yes	Slinging	180.5
Short-Range	Summer	FNDN	2024-06-06	755690	4	DrillServ	Slinging	Yes	Yes	Slinging	122.5
Short-Range	Summer	FNDN	2024-06-06	755690	5	PaxLoc	Passenger	No	No	No Reason	406.8
Short-Range	Summer	FNDN	2024-06-06	755690	6	PaxLoc	Passenger	No	Yes	No Reason	224.0
Short-Range	Summer	GUIT	2024-06-06	755842	3	CrewChg	Passenger	No	No	N/A	397.8
Short-Range	Summer	GUIT	2024-06-06	755842	4	Fuel	Slinging	Yes	Yes	Slinging	234.2
Short-Range	Summer	FNDN	2024-06-07	756411	1	Core	Slinging	Yes	Yes	Slinging	248.4
Short-Range	Summer	FNDN	2024-06-07	756411	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-07	756411	3	PaxLoc	Passenger	No	Yes	No Reason	188.5
Short-Range	Summer	FNDN	2024-06-07	756411	5	CrewChg	Passenger	No	Yes	No Reason	221.7
Short-Range	Summer	GUIT	2024-06-07	756484	1	DrillServ	Slinging	Yes	Yes	Slinging	254.3
Short-Range	Summer	GUIT	2024-06-07	756484	3	PaxLoc	Passenger	No	Yes	No Reason	275.5
Short-Range	Summer	GUIT	2024-06-07	756484	4	PaxLoc	Passenger	No	Yes	No Reason	277.7
Short-Range	Summer	GUIT	2024-06-07	756484	6	DrillServ	Slinging	Yes	No	Slinging	338.6
Short-Range	Summer	GUIT	2024-06-08	756954	1	DrillServ	Slinging	Yes	Yes	Slinging	281.8
Short-Range	Summer	GUIT	2024-06-08	756954	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-08	756954	7	DrillServ	Slinging	Yes	Yes	Slinging	285.7
Short-Range	Summer	FNDN	2024-06-08	757063	1	CrewChg	Passenger	Yes	Yes	Weather	116.5
Short-Range	Summer	FNDN	2024-06-08	757063	3	DrillServ	Slinging	Yes	Yes	Slinging	174.8
Short-Range	Summer	FNDN	2024-06-08	757063	5	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FNDN	2024-06-08	757063	6	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-09	757368	2	Core	Slinging	Yes	Yes	Slinging	250.8
Short-Range	Summer	FNDN	2024-06-09	757368	5	PaxLoc	Passenger	No	No	No Reason	339.9
Short-Range	Summer	FNDN	2024-06-09	757368	6	Move	Slinging	Yes	Yes	Slinging	88.7
Short-Range	Summer	FNDN	2024-06-09	757368	7	Move	Slinging	Yes	Yes	Slinging	147.6
Short-Range	Summer	GUIT	2024-06-09	757512	1	Move	Slinging	Yes	Yes	Slinging	231.4
Short-Range	Summer	GUIT	2024-06-09	757512	3	DrillServ	Slinging	Yes	Yes	Slinging	295.8
Short-Range	Summer	GUIT	2024-06-10	757901	1	PaxLoc	Passenger	No	Yes	No Reason	253.1
Short-Range	Summer	GUIT	2024-06-10	757901	5	DrillServ	Slinging	Yes	Yes	Slinging	176.5
Short-Range	Summer	GUIT	2024-06-10	757901	7	PaxLoc	Passenger	No	Yes	No Reason	198.4
Short-Range	Summer	GUIT	2024-06-10	757901	8	PaxLoc	Passenger	No	Yes	No Reason	262.4
Short-Range	Summer	FNDN	2024-06-10	758035	2	PaxLoc	Passenger	Yes	Yes	Weather	137.4
Short-Range	Summer	FNDN	2024-06-10	758035	8	PaxLoc	Passenger	Yes	Yes	Weather	123.4
Short-Range	Summer	GUIT	2024-06-11	758465	1	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-11	758465	2	PaxLoc	Passenger	No	Yes	No Reason	237.7
Short-Range	Summer	GUIT	2024-06-11	758465	3	PaxLoc	Passenger	No	No	N/A	361.7
Short-Range	Summer	GUIT	2024-06-11	758465	4	PaxLoc	Passenger	No	Yes	No Reason	90.2
Short-Range	Summer	GUIT	2024-06-11	758465	6	Floor	Slinging	Yes	No	Slinging	344.1
Short-Range	Summer	GUIT	2024-06-11	758465	7	PaxLoc	Passenger	No	Yes	No Reason	216.4
Short-Range	Summer	GUIT	2024-06-11	758465	10	DrillServ	Slinging	Yes	Yes	Slinging	231.3
Short-Range	Summer	FNDN	2024-06-11	758607	1	CrewChg	Passenger	Yes	Yes	Weather	139.0
Short-Range	Summer	FNDN	2024-06-11	758607	9	Move	Slinging	Yes	Yes	Slinging	71.5
Short-Range	Summer	GUIT	2024-06-12	759080	1	PaxLoc	Passenger	No	Yes	No Reason	150.1
Short-Range	Summer	GUIT	2024-06-12	759080	2	PaxLoc	Passenger	No	Yes	No Reason	239.4
Short-Range	Summer	FNDN	2024-06-12	759100	6	PaxLoc	Passenger	No	No	No Reason	320.2
Short-Range	Summer	FNDN	2024-06-12	759100	7	PaxLoc	Passenger	No	Yes	No Reason	102.9
Short-Range	Summer	FNDN	2024-06-12	759100	8	CrewChg	Passenger	No	No	No Reason	336.3
Short-Range	Summer	FNDN	2024-06-13	759504	2	DrillServ	Slinging	Yes	Yes	Slinging	191.7
Short-Range	Summer	FNDN	2024-06-13	759504	3	PaxLoc	Passenger	No	Yes	Short Flight	170.6
Short-Range	Summer	FNDN	2024-06-13	759504	7	Move	Slinging	Yes	Yes	Slinging	144.4
Short-Range	Summer	FNDN	2024-06-13	759504	8	Move	Slinging	Yes	Yes	Slinging	153.4
Short-Range	Summer	FNDN	2024-06-13	759504	9	Move	Slinging	Yes	Yes	Slinging	139.6
Short-Range	Summer	GUIT	2024-06-13	760083	2	PaxLoc	Passenger	No	No	N/A	396.6
Short-Range	Summer	GUIT	2024-06-13	760083	3	Move	Slinging	Yes	Yes	Slinging	158.8
Short-Range	Summer	GUIT	2024-06-13	760083	4	Move	Slinging	Yes	Yes	Slinging	179.4
Short-Range	Summer	GUIT	2024-06-13	760083	5	PaxLoc	Passenger	No	No	N/A	439.9
Short-Range	Summer	GUIT	2024-06-13	760083	8	Move	Slinging	Yes	Yes	Slinging	137.1
Short-Range	Summer	FNDN	2024-06-14	760348	4	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-14	760348	6	DrillServ	Slinging	Yes	Yes	Slinging	221.2
Short-Range	Summer	GUIT	2024-06-14	760516	3	PaxLoc	Passenger	No	Yes	No Reason	219.9
Short-Range	Summer	FNDN	2024-06-15	760814	2	PaxLoc	Passenger	Yes	Yes	Weather	177.2
Short-Range	Summer	FNDN	2024-06-15	760814	3	PaxLoc	Passenger	Yes	Yes	Weather	255.7
Short-Range	Summer	FNDN	2024-06-15	760814	7	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-15	760907	1	PaxLoc	Passenger	No	Yes	No Reason	231.7
Short-Range	Summer	GUIT	2024-06-15	760907	2	DrillServ	Slinging	Yes	Yes	Slinging	223.8
Short-Range	Summer	GUIT	2024-06-15	760907	5	PaxLoc	Passenger	No	Yes	No Reason	190.3
Short-Range	Summer	GUIT	2024-06-15	760907	6	PaxLoc	Passenger	No	Yes	No Reason	285.6
Short-Range	Summer	GUIT	2024-06-15	760907	9	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-16	761146	3	PaxLoc	Passenger	No	Yes	No Reason	197.2

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	GUIT	2024-06-16	761146	4	PaxLoc	Passenger	No	Yes	No Reason	256.5
Short-Range	Summer	GUIT	2024-06-16	761146	5	PaxLoc	Passenger	No	Yes	No Reason	111.6
Short-Range	Summer	GUIT	2024-06-16	761146	7	PaxLoc	Passenger	No	Yes	No Reason	141.7
Short-Range	Summer	GUIT	2024-06-16	761146	8	Move	Slinging	Yes	Yes	Slinging	106.2
Short-Range	Summer	GUIT	2024-06-16	761146	9	Move	Slinging	Yes	Yes	Slinging	119.9
Short-Range	Summer	FNDN	2024-06-16	761227	3	Core	Slinging	Yes	Yes	Slinging	207.0
Short-Range	Summer	FNDN	2024-06-16	761227	5	PaxLoc	Passenger	No	Yes	No Reason	197.0
Short-Range	Summer	FNDN	2024-06-16	761227	7	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-17	761589	1	PaxLoc	Passenger	No	Yes	No Reason	202.2
Short-Range	Summer	GUIT	2024-06-17	761589	3	DrillServ	Slinging	Yes	Yes	Slinging	259.0
Short-Range	Summer	GUIT	2024-06-17	761589	6	PaxLoc	Passenger	No	Yes	No Reason	230.7
Short-Range	Summer	GUIT	2024-06-17	761589	7	PaxLoc	Passenger	No	Yes	No Reason	193.7
Short-Range	Summer	FNDN	2024-06-17	761693	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-17	761693	4	PaxLoc	Passenger	No	Yes	No Reason	121.2
Short-Range	Summer	FNDN	2024-06-17	761693	6	PaxLoc	Passenger	No	Yes	Short Flight	120.6
Short-Range	Summer	FNDN	2024-06-17	761693	7	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-18	762056	2	DrillServ	Slinging	Yes	Yes	Slinging	172.9
Short-Range	Summer	GUIT	2024-06-18	762259	2	Move	Slinging	Yes	Yes	Slinging	150.9
Short-Range	Summer	GUIT	2024-06-18	762259	3	Move	Slinging	Yes	Yes	Slinging	190.5
Short-Range	Summer	FNDN	2024-06-18	762278	1	PaxLoc	Passenger	No	No	N/A	398.7
Short-Range	Summer	GUIT	2024-06-19	762741	2	PaxLoc	Passenger	No	Yes	No Reason	183.5
Short-Range	Summer	FNDN	2024-06-19	762874	2	PaxLoc	Passenger	No	Yes	No Reason	126.3
Short-Range	Summer	FNDN	2024-06-19	762874	3	PaxLoc	Passenger	No	Yes	No Reason	21.7
Short-Range	Summer	FNDN	2024-06-19	762874	4	PaxLoc	Passenger	No	Yes	No Reason	146.2
Short-Range	Summer	FNDN	2024-06-19	762874	5	PaxLoc	Passenger	No	Yes	No Reason	20.1
Short-Range	Summer	FNDN	2024-06-19	762874	8	PaxLoc	Passenger	No	Yes	No Reason	152.1
Short-Range	Summer	FNDN	2024-06-19	762874	9	PaxLoc	Passenger	No	Yes	No Reason	143.3
Short-Range	Summer	FNDN	2024-06-19	762874	11	PaxLoc	Passenger	No	Yes	No Reason	227.5
Short-Range	Summer	FNDN	2024-06-19	762874	14	DrillServ	Slinging	Yes	Yes	Slinging	145.2
Short-Range	Summer	FNDN	2024-06-20	763491	3	PaxLoc	Passenger	No	Yes	No Reason	103.1
Short-Range	Summer	FNDN	2024-06-20	763491	6	DrillServ	Slinging	Yes	Yes	Slinging	164.6
Short-Range	Summer	FNDN	2024-06-20	763491	8	Floor	Slinging	Yes	Yes	Slinging	127.2
Short-Range	Summer	FNDN	2024-06-20	763491	10	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-20	763491	12	PaxLoc	Passenger	No	Yes	No Reason	21.2
Short-Range	Summer	GUIT	2024-06-20	763598	3	Move	Slinging	Yes	Yes	Slinging	85.6
Short-Range	Summer	FNDN	2024-06-21	764182	2	PaxLoc	Passenger	No	Yes	No Reason	31.6
Short-Range	Summer	FNDN	2024-06-21	764182	3	PaxLoc	Passenger	No	Yes	No Reason	151.8
Short-Range	Summer	FNDN	2024-06-21	764182	4	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-21	764182	5	PaxLoc	Passenger	No	Yes	No Reason	257.3
Short-Range	Summer	FNDN	2024-06-21	764182	6	PaxLoc	Passenger	No	No	N/A	519.0
Short-Range	Summer	FNDN	2024-06-21	764182	7	PaxLoc	Passenger	No	Yes	No Reason	288.4
Short-Range	Summer	FNDN	2024-06-21	764182	8	PaxLoc	Passenger	No	Yes	No Reason	60.6
Short-Range	Summer	GUIT	2024-06-22	764685	3	Move	Slinging	Yes	Yes	Slinging	108.0
Short-Range	Summer	GUIT	2024-06-22	764685	4	Move	Slinging	Yes	Yes	Slinging	115.5
Short-Range	Summer	FNDN	2024-06-22	764734	2	PaxLoc	Passenger	No	Yes	No Reason	116.1
Short-Range	Summer	FNDN	2024-06-22	764734	6	PaxLoc	Passenger	No	Yes	No Reason	123.6
Short-Range	Summer	GUIT	2024-06-23	765108	1	PaxLoc	Passenger	No	Yes	No Reason	282.1
Short-Range	Summer	GUIT	2024-06-23	765108	3	Move	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	GUIT	2024-06-23	765108	4	Move	Slinging	Yes	Yes	Slinging	76.0
Short-Range	Summer	FNDN	2024-06-23	765224	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-23	765224	3	PaxLoc	Passenger	No	Yes	No Reason	136.5
Short-Range	Summer	FNDN	2024-06-23	765224	6	PaxLoc	Passenger	No	Yes	No Reason	111.7
Short-Range	Summer	FNDN	2024-06-23	765224	7	PaxLoc	Passenger	No	Yes	No Reason	194.7
Short-Range	Summer	FNDN	2024-06-23	765224	8	DrillServ	Slinging	Yes	Yes	Slinging	253.0
Short-Range	Summer	FNDN	2024-06-23	765224	9	PaxLoc	Passenger	No	Yes	No Reason	139.8
Short-Range	Summer	FNDN	2024-06-23	765224	10	PaxLoc	Passenger	No	Yes	No Reason	85.0
Short-Range	Summer	FNDN	2024-06-23	765224	11	PaxLoc	Passenger	No	Yes	No Reason	103.8
Short-Range	Summer	FNDN	2024-06-23	765224	12	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-24	765834	6	PaxLoc	Passenger	No	Yes	No Reason	99.6
Short-Range	Summer	GUIT	2024-06-25	766434	3	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-25	766492	2	PaxLoc	Passenger	No	Yes	No Reason	208.1
Short-Range	Summer	FNDN	2024-06-25	766492	5	PaxLoc	Passenger	No	Yes	No Reason	190.5
Short-Range	Summer	FNDN	2024-06-25	766492	8	Floor	Slinging	Yes	Yes	Slinging	64.6
Short-Range	Summer	FNDN	2024-06-25	766492	9	Move	Slinging	Yes	Yes	Slinging	38.1
Short-Range	Summer	FNDN	2024-06-25	766492	10	Move	Slinging	Yes	Yes	Slinging	32.2
Short-Range	Summer	GUIT	2024-06-26	766974	2	Move	Slinging	Yes	No	Slinging	326.9
Short-Range	Summer	GUIT	2024-06-26	766974	3	Move	Slinging	Yes	No	Slinging	316.2
Short-Range	Summer	GUIT	2024-06-26	766974	5	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-06-26	766974	8	Move	Slinging	Yes	No	Slinging	359.1
Short-Range	Summer	FNDN	2024-06-26	767121	2	PaxLoc	Passenger	No	Yes	No Reason	164.1
Short-Range	Summer	FNDN	2024-06-26	767121	4	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-26	767121	7	Move	Slinging	Yes	Yes	Slinging	209.4
Short-Range	Summer	FNDN	2024-06-26	767121	8	Move	Slinging	Yes	Yes	Slinging	207.2
Short-Range	Summer	GUIT	2024-06-27	767585	2	Move	Slinging	Yes	No	Slinging	321.4
Short-Range	Summer	GUIT	2024-06-27	767585	3	Floor	Slinging	Yes	No	Slinging	315.2
Short-Range	Summer	GUIT	2024-06-27	767585	5	DrillServ	Slinging	Yes	No	Slinging	323.4
Short-Range	Summer	GUIT	2024-06-27	767585	8	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-06-27	767791	5	PaxLoc	Passenger	No	No	N/A	321.9
Short-Range	Summer	FNDN	2024-06-27	767791	10	Move	Slinging	Yes	No	Slinging	322.3
Short-Range	Summer	FNDN	2024-06-27	767791	12	PaxLoc	Passenger	No	No	N/A	320.6
Short-Range	Summer	GUIT	2024-06-28	768266	1	PaxLoc	Passenger	No	Yes	No Reason	252.8
Short-Range	Summer	GUIT	2024-06-28	768266	5	CrewChg	Passenger	No	Yes	No Reason	190.0
Short-Range	Summer	GUIT	2024-06-28	768266	6	PaxLoc	Passenger	No	No	N/A	302.2
Short-Range	Summer	FNDN	2024-06-28	768404	1	CrewChg	Passenger	No	Yes	No Reason	102.9
Short-Range	Summer	FNDN	2024-06-28	768404	2	Core	Slinging	Yes	Yes	Slinging	99.3
Short-Range	Summer	FNDN	2024-06-28	768404	3	DrillServ	Slinging	Yes	Yes	Slinging	178.0
Short-Range	Summer	FNDN	2024-06-28	768404	4	DrillServ	Slinging	Yes	Yes	Slinging	250.9
Short-Range	Summer	FNDN	2024-06-28	768404	6	PaxLoc	Passenger	No	No	N/A	383.0
Short-Range	Summer	FNDN	2024-06-28	768404	7	PaxLoc	Passenger	No	No	N/A	471.2
Short-Range	Summer	FNDN	2024-06-28	768404	9	Move	Slinging	Yes	Yes	Slinging	121.6
Short-Range	Summer	FNDN	2024-06-28	768404	10	Move	Slinging	Yes	Yes	Slinging	112.2
Short-Range	Summer	FNDN	2024-06-28	768404	12	PaxLoc	Passenger	No	Yes	No Reason	253.3
Short-Range	Summer	GUIT	2024-06-29	768912	3	PaxLoc	Passenger	No	Yes	No Reason	231.9
Short-Range	Summer	GUIT	2024-06-29	768912	6	CrewChg	Passenger	No	No	N/A	348.2
Short-Range	Summer	GUIT	2024-06-29	768912	7	Floor	Slinging	Yes	Yes	Slinging	150.7
Short-Range	Summer	FNDN	2024-06-29	768947	1	CrewChg	Passenger	No	Yes	No Reason	266.0

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FNDN	2024-06-29	768947	2	Core	Slinging	Yes	Yes	Slinging	246.5
Short-Range	Summer	FNDN	2024-06-29	768947	3	PaxLoc	Passenger	No	Yes	No Reason	213.3
Short-Range	Summer	FNDN	2024-06-29	768947	7	PaxLoc	Passenger	No	No	N/A	308.4
Short-Range	Summer	FNDN	2024-06-29	768947	8	PaxLoc	Passenger	No	No	N/A	305.4
Short-Range	Summer	FNDN	2024-06-29	768947	9	Move	Slinging	Yes	Yes	Slinging	77.8
Short-Range	Summer	FNDN	2024-06-29	768947	10	Move	Slinging	Yes	No	Slinging	300.3
Short-Range	Summer	FNDN	2024-06-29	768947	11	PaxLoc	Passenger	No	No	N/A	351.5
Short-Range	Summer	FNDN	2024-06-29	768947	12	PaxLoc	Passenger	No	Yes	No Reason	283.4
Short-Range	Summer	FNDN	2024-06-29	768947	13	PaxLoc	Passenger	No	No	N/A	339.3
Short-Range	Summer	FNDN	2024-06-30	769516	1	CrewChg	Passenger	No	No	N/A	452.5
Short-Range	Summer	FNDN	2024-06-30	769516	2	Core	Slinging	Yes	No	Slinging	373.7
Short-Range	Summer	FNDN	2024-06-30	769516	3	PaxLoc	Passenger	No	No	N/A	422.2
Short-Range	Summer	FNDN	2024-06-30	769516	4	PaxLoc	Passenger	No	Yes	No Reason	109.9
Short-Range	Summer	FNDN	2024-06-30	769516	5	PaxLoc	Passenger	No	Yes	No Reason	229.4
Short-Range	Summer	FNDN	2024-06-30	769516	6	PaxLoc	Passenger	No	No	N/A	301.9
Short-Range	Summer	FNDN	2024-06-30	769516	7	PaxLoc	Passenger	No	No	N/A	316.3
Short-Range	Summer	FNDN	2024-06-30	769516	8	PaxLoc	Passenger	No	No	N/A	381.7
Short-Range	Summer	FNDN	2024-06-30	769516	9	Move	Slinging	Yes	Yes	Slinging	135.6
Short-Range	Summer	FNDN	2024-06-30	769516	10	PaxLoc	Passenger	No	No	N/A	396.5
Short-Range	Summer	FNDN	2024-06-30	769516	11	PaxLoc	Passenger	No	Yes	No Reason	152.8
Short-Range	Summer	FNDN	2024-06-30	769516	12	PaxLoc	Passenger	No	Yes	No Reason	249.0
Short-Range	Summer	FNDN	2024-06-30	769516	13	CrewChg	Passenger	No	No	N/A	357.9
Short-Range	Summer	GUIT	2024-06-30	769692	3	PaxLoc	Passenger	No	No	N/A	318.0
Short-Range	Summer	GUIT	2024-06-30	769692	4	PaxLoc	Passenger	No	Yes	No Reason	282.7
Short-Range	Summer	GUIT	2024-07-01	770096	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-01	770096	5	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-01	770096	6	PaxLoc	Passenger	No	Yes	Short Flight	157.8
Short-Range	Summer	GUIT	2024-07-01	770096	7	PaxLoc	Passenger	No	Yes	Short Flight	44.5
Short-Range	Summer	GUIT	2024-07-01	770096	9	Core	Slinging	Yes	Yes	Slinging	202.5
Short-Range	Summer	GUIT	2024-07-01	770096	10	CrewChg	Passenger	No	Yes	No Reason	187.8
Short-Range	Summer	FNDN	2024-07-01	770117	1	CrewChg	Passenger	No	No	N/A	328.0
Short-Range	Summer	FNDN	2024-07-01	770117	2	Core	Slinging	Yes	Yes	Slinging	203.2
Short-Range	Summer	FNDN	2024-07-01	770117	5	DrillServ	Slinging	Yes	No	Slinging	324.6
Short-Range	Summer	FNDN	2024-07-01	770117	6	PaxLoc	Passenger	No	Yes	No Reason	184.3
Short-Range	Summer	FNDN	2024-07-01	770117	7	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-02	770479	1	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-02	770479	2	PaxLoc	Passenger	No	Yes	No Reason	269.4
Short-Range	Summer	GUIT	2024-07-02	770479	3	PaxLoc	Passenger	No	Yes	Short Flight	132.3
Short-Range	Summer	GUIT	2024-07-02	770479	4	DrillServ	Slinging	Yes	Yes	Slinging	169.4
Short-Range	Summer	GUIT	2024-07-02	770479	5	PaxLoc	Passenger	No	Yes	Short Flight	119.6
Short-Range	Summer	FNDN	2024-07-02	770738	1	CrewChg	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-02	770738	2	Core	Slinging	Yes	Yes	Slinging	200.0
Short-Range	Summer	FNDN	2024-07-02	770738	3	PaxLoc	Passenger	No	Yes	No Reason	139.1
Short-Range	Summer	FNDN	2024-07-02	770738	4	PaxLoc	Passenger	No	Yes	No Reason	258.3
Short-Range	Summer	FNDN	2024-07-02	770738	5	LocSlng	Slinging	Yes	Yes	Slinging	287.4
Short-Range	Summer	FNDN	2024-07-02	770738	6	DrillServ	Slinging	Yes	Yes	Slinging	164.5
Short-Range	Summer	FNDN	2024-07-02	770738	7	PaxLoc	Passenger	No	Yes	No Reason	228.3
Short-Range	Summer	FNDN	2024-07-02	770738	8	DrillServ	Slinging	Yes	Yes	Slinging	197.2
Short-Range	Summer	FNDN	2024-07-02	770738	9	PaxLoc	Passenger	No	Yes	No Reason	272.0

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FNDN	2024-07-02	770738	10	PaxLoc	Passenger	No	Yes	No Reason	213.4
Short-Range	Summer	FNDN	2024-07-03	771380	1	PaxLoc	Passenger	No	No	N/A	346.9
Short-Range	Summer	FNDN	2024-07-03	771380	2	PaxLoc	Passenger	No	Yes	No Reason	296.5
Short-Range	Summer	FNDN	2024-07-03	771380	3	PaxLoc	Passenger	No	Yes	No Reason	188.0
Short-Range	Summer	FNDN	2024-07-03	771380	4	PaxLoc	Passenger	No	Yes	No Reason	160.1
Short-Range	Summer	GUIT	2024-07-03	771460	1	PaxLoc	Passenger	No	Yes	No Reason	291.3
Short-Range	Summer	GUIT	2024-07-04	771839	1	PaxLoc	Passenger	No	Yes	Short Flight	221.1
Short-Range	Summer	GUIT	2024-07-04	771839	2	PaxLoc	Passenger	No	Yes	Short Flight	158.5
Short-Range	Summer	GUIT	2024-07-04	771839	3	PaxLoc	Passenger	No	Yes	No Reason	250.9
Short-Range	Summer	FNDN	2024-07-04	772147	1	LocSlng	Slinging	Yes	No	Slinging	526.6
Short-Range	Summer	FNDN	2024-07-04	772147	3	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-05	772491	1	PaxLoc	Passenger	No	Yes	No Reason	238.2
Short-Range	Summer	GUIT	2024-07-05	772491	3	PaxLoc	Passenger	No	No	N/A	349.1
Short-Range	Summer	FNDN	2024-07-05	772754	1	PaxLoc	Passenger	No	Yes	No Reason	134.1
Short-Range	Summer	FNDN	2024-07-05	772754	3	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-05	772754	4	PaxLoc	Passenger	No	Yes	No Reason	150.1
Short-Range	Summer	GUIT	2024-07-06	773150	1	PaxLoc	Passenger	No	Yes	Short Flight	204.4
Short-Range	Summer	GUIT	2024-07-06	773150	2		Passenger	No	Yes	No Reason	276.2
Short-Range	Summer	GUIT	2024-07-06	773150	3	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-06	773150	4	PaxLoc	Passenger	No	Yes	No Reason	289.1
Short-Range	Summer	GUIT	2024-07-06	773150	5	PaxLoc	Passenger	No	Yes	No Reason	227.9
Short-Range	Summer	FNDN	2024-07-06	773315	2	PaxLoc	Passenger	No	Yes	Short Flight	107.2
Short-Range	Summer	GUIT	2024-07-08	774336	1	PaxLoc	Passenger	Yes	Yes	Weather	86.4
Short-Range	Summer	GUIT	2024-07-08	774415	4	PaxLoc	Passenger	No	Yes	No Reason	250.4
Short-Range	Summer	GUIT	2024-07-08	774415	5	PaxLoc	Passenger	No	Yes	No Reason	296.2
Short-Range	Summer	FNDN	2024-07-08	774616	1	PaxLoc	Passenger	Yes	Yes	Weather	110.0
Short-Range	Summer	FNDN	2024-07-08	774616	2	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-08	774616	3	PaxLoc	Passenger	No	No	No Reason	309.3
Short-Range	Summer	FNDN	2024-07-08	774616	4	PaxLoc	Passenger	No	Yes	No Reason	227.3
Short-Range	Summer	FNDN	2024-07-08	774616	5	PaxLoc	Passenger	No	Yes	No Reason	20.1
Short-Range	Summer	GUIT	2024-07-09	775411	1	PaxLoc	Passenger	No	No	N/A	424.2
Short-Range	Summer	GUIT	2024-07-09	775411	3	PaxLoc	Passenger	No	Yes	No Reason	184.2
Short-Range	Summer	GUIT	2024-07-09	775411	4	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-09	775416	1	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-09	775416	2	PaxLoc	Passenger	No	Yes	No Reason	42.4
Short-Range	Summer	GUIT	2024-07-10	776209	1	PaxLoc	Passenger	No	Yes	No Reason	164.9
Short-Range	Summer	GUIT	2024-07-10	776209	2	PaxLoc	Passenger	No	Yes	No Reason	125.8
Short-Range	Summer	FNDN	2024-07-10	776250	1	PaxLoc	Passenger	Yes	Yes	Weather	95.3
Short-Range	Summer	FNDN	2024-07-10	776250	3	PaxLoc	Passenger	No	Yes	No Reason	281.8
Short-Range	Summer	FNDN	2024-07-10	776250	4	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-10	776250	5	PaxLoc	Passenger	No	Yes	Short Flight	24.7
Short-Range	Summer	FNDN	2024-07-10	776250	6	PaxLoc	Passenger	No	No	No Reason	400.7
Short-Range	Summer	GUIT	2024-07-11	776954	1	PaxLoc	Passenger	No	Yes	No Reason	145.6
Short-Range	Summer	GUIT	2024-07-11	776954	2	Fuel	Slinging	Yes	Yes	Slinging	240.9
Short-Range	Summer	GUIT	2024-07-11	776954	3	PaxLoc	Passenger	No	Yes	No Reason	212.4
Short-Range	Summer	GUIT	2024-07-11	776954	4	PaxLoc	Passenger	No	Yes	No Reason	158.6

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FNDN	2024-07-11	776971	3	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-12	777716	1	PaxLoc	Passenger	No	Yes	No Reason	170.7
Short-Range	Summer	FNDN	2024-07-12	777716	2	PaxLoc	Passenger	No	Yes	No Reason	282.6
Short-Range	Summer	FNDN	2024-07-12	777716	3	PaxLoc	Passenger	No	Yes	No Reason	211.0
Short-Range	Summer	FNDN	2024-07-12	777716	5	PaxLoc	Passenger	No	Yes	Short Flight	57.2
Short-Range	Summer	FNDN	2024-07-12	777716	7	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-12	777716	8	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-07-12	777716	9	PaxLoc	Passenger	No	No	No Reason	455.2
Short-Range	Summer	GUIT	2024-07-12	778126	1	PaxLoc	Passenger	No	Yes	No Reason	290.8
Short-Range	Summer	GUIT	2024-07-12	778126	2	PaxLoc	Passenger	No	Yes	No Reason	241.8
Short-Range	Summer	FNDN	2024-07-13	778409	2	PaxLoc	Passenger	No	Yes	No Reason	204.2
Short-Range	Summer	FNDN	2024-07-13	778409	4	PaxLoc	Passenger	No	No	No Reason	307.2
Short-Range	Summer	GUIT	2024-07-13	778410	1	PaxLoc	Passenger	No	Yes	No Reason	248.9
Short-Range	Summer	GUIT	2024-07-13	778410	3	PaxLoc	Passenger	No	Yes	No Reason	112.0
Short-Range	Summer	GUIT	2024-07-14	778798	4	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-14	778798	5	PaxLoc	Passenger	No	Yes	No Reason	140.3
Short-Range	Summer	GUIT	2024-07-14	778798	7	PaxLoc	Passenger	No	Yes	No Reason	61.3
Short-Range	Summer	FNDN	2024-07-14	779070	1	PaxLoc	Passenger	No	Yes	No Reason	292.4
Short-Range	Summer	FGAV	2024-07-14	779073	1	PaxLoc	Passenger	No	Yes	No Reason	161.6
Short-Range	Summer	FGAV	2024-07-14	779073	2	PaxLoc	Passenger	No	No	No Reason	331.3
Short-Range	Summer	FGAV	2024-07-15	779839	1	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	GUIT	2024-07-15	779894	1	PaxLoc	Passenger	No	No	N/A	353.1
Short-Range	Summer	GUIT	2024-07-15	779894	2	PaxLoc	Passenger	No	Yes	No Reason	167.9
Short-Range	Summer	FGAV	2024-07-16	780557	1	PaxLoc	Passenger	No	Yes	No Reason	233.4
Short-Range	Summer	FGAV	2024-07-16	780557	2	Move	Slinging	Yes	Yes	Slinging	149.6
Short-Range	Summer	FGAV	2024-07-16	780557	3	Move	Slinging	Yes	Yes	Slinging	159.3
Short-Range	Summer	FGAV	2024-07-16	780557	4	Move	Slinging	Yes	Yes	Slinging	162.9
Short-Range	Summer	FGAV	2024-07-16	780557	5	Move	Slinging	Yes	Yes	Slinging	180.6
Short-Range	Summer	FGAV	2024-07-16	780557	6	PaxLoc	Passenger	No	No	No Reason	312.3
Short-Range	Summer	FGAV	2024-07-16	780557	8	CrewChg	Passenger	No	No	No Reason	311.8
Short-Range	Summer	GUIT	2024-07-16	780750	2	Move	Slinging	Yes	Yes	Slinging	188.8
Short-Range	Summer	FGAV	2024-07-17	781244	1	CrewChg	Passenger	No	No	No Reason	319.7
Short-Range	Summer	FGAV	2024-07-17	781244	4	Core	Slinging	Yes	Yes	Slinging	159.5
Short-Range	Summer	FGAV	2024-07-17	781244	5	PaxLoc	Passenger	No	Yes	No Reason	297.8
Short-Range	Summer	FGAV	2024-07-17	781244	6	PaxLoc	Passenger	No	No	No Reason	397.6
Short-Range	Summer	FGAV	2024-07-17	781244	7	DrillServ	Slinging	Yes	Yes	Slinging	274.7
Short-Range	Summer	FGAV	2024-07-17	781244	9	CrewChg	Passenger	No	No	No Reason	329.0
Short-Range	Summer	FGAV	2024-07-18	782174	1	CrewChg	Passenger	No	No	No Reason	360.5
Short-Range	Summer	FGAV	2024-07-18	782174	2	DrillServ	Slinging	Yes	Yes	Slinging	276.7
Short-Range	Summer	FGAV	2024-07-18	782174	5	PaxLoc	Passenger	No	No	No Reason	371.8
Short-Range	Summer	FGAV	2024-07-18	782174	6	Move	Slinging	Yes	Yes	Slinging	112.9
Short-Range	Summer	FGAV	2024-07-18	782174	7	Move	Slinging	Yes	Yes	Slinging	121.2
Short-Range	Summer	FGAV	2024-07-18	782174	8	DrillServ	Slinging	Yes	Yes	Slinging	215.1
Short-Range	Summer	FGAV	2024-07-18	782174	9	PaxLoc	Passenger	No	No	No Reason	323.2
Short-Range	Summer	FGAV	2024-07-18	782174	11	CrewChg	Passenger	No	No	No Reason	316.1
Short-Range	Summer	FGAV	2024-07-19	782745	1	CrewChg	Passenger	No	No	No Reason	372.4
Short-Range	Summer	FGAV	2024-07-19	782745	4	DrillServ	Slinging	Yes	Yes	Slinging	196.3
Short-Range	Summer	FGAV	2024-07-19	782745	6	CrewChg	Passenger	Yes	Yes	Weather	205.9
Short-Range	Summer	FGAV	2024-07-20	783635	1	Core	Slinging	Yes	Yes	Slinging	185.4

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FGAV	2024-07-20	783635	4	PaxLoc	Passenger	No	No	No Reason	382.2
Short-Range	Summer	FGAV	2024-07-20	783635	5	Move	Slinging	Yes	Yes	Slinging	111.0
Short-Range	Summer	FGAV	2024-07-20	783635	7	Move	Slinging	Yes	Yes	Slinging	150.8
Short-Range	Summer	FGAV	2024-07-20	783635	9	CrewChg	Passenger	No	No	No Reason	367.4
Short-Range	Summer	FGAV	2024-07-21	784351	1	Core	Slinging	Yes	No	Slinging	329.5
Short-Range	Summer	FGAV	2024-07-21	784351	3	PaxLoc	Passenger	No	Yes	Short Flight	66.2
Short-Range	Summer	FGAV	2024-07-21	784351	5	Reposition	Slinging	Yes	Yes	Slinging	55.9
Short-Range	Summer	FGAV	2024-07-21	784351	6	PaxLoc	Passenger	No	No	No Reason	377.2
Short-Range	Summer	FGAV	2024-07-21	784351	9	CrewChg	Passenger	No	No	No Reason	363.1
Short-Range	Summer	FGAV	2024-07-22	785150	1	Core	Slinging	Yes	No	Slinging	332.1
Short-Range	Summer	FGAV	2024-07-22	785150	3	Reposition	Slinging	Yes	Yes	Slinging	272.3
Short-Range	Summer	FGAV	2024-07-22	785150	4	CrewChg	Passenger	No	No	No Reason	333.7
Short-Range	Summer	FGAV	2024-07-23	785614	2	Reposition	Slinging	Yes	Yes	Slinging	55.3
Short-Range	Summer	FGAV	2024-07-23	786091	2	Move	Slinging	Yes	Yes	Slinging	175.4
Short-Range	Summer	FGAV	2024-07-23	786091	5	Move	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-07-24	786857	3	PaxLoc	Passenger	No	Yes	No Reason	122.3
Short-Range	Summer	FGAV	2024-07-24	786857	7	Move	Slinging	Yes	Yes	Slinging	295.0
Short-Range	Summer	FGAV	2024-07-24	786857	9	PaxLoc	Passenger	No	Yes	No Reason	226.4
Short-Range	Summer	FGAV	2024-07-25	787627	8	Move	Slinging	Yes	Yes	Slinging	290.4
Short-Range	Summer	FGAV	2024-07-25	787627	9	Floor	Slinging	Yes	No	Slinging	354.5
Short-Range	Summer	FGAV	2024-07-26	788351	2	PaxLoc	Passenger	No	Yes	No Reason	119.5
Short-Range	Summer	FGAV	2024-07-26	788351	4	PaxLoc	Passenger	Yes	Yes	Weather	127.4
Short-Range	Summer	FGAV	2024-07-26	788351	5	PaxLoc	Passenger	Yes	Yes	Weather	207.2
Short-Range	Summer	FGAV	2024-07-26	788351	6	PaxLoc	Passenger	No	No	N/A	317.1
Short-Range	Summer	FGAV	2024-07-26	788351	11	PaxLoc	Passenger	No	Yes	No Reason	189.0
Short-Range	Summer	FGAV	2024-07-27	788985	4	PaxLoc	Passenger	No	Yes	No Reason	266.8
Short-Range	Summer	FGAV	2024-07-27	788985	6	Floor	Slinging	Yes	Yes	Slinging	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-07-27	788985	8	DrillServ	Slinging	Yes	No	Slinging	381.3
Short-Range	Summer	FGAV	2024-07-27	788985	9	DrillServ	Slinging	Yes	No	Slinging	365.8
Short-Range	Summer	FGAV	2024-07-27	788985	11	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-07-27	788985	12	PaxLoc	Passenger	No	No	N/A	327.4
Short-Range	Summer	FGAV	2024-07-27	788985	13	PaxLoc	Passenger	No	Yes	No Reason	224.7
Short-Range	Summer	FGAV	2024-07-28	789652	4	PaxLoc	Passenger	No	Yes	No Reason	153.9
Short-Range	Summer	FGAV	2024-07-29	790492	4	Move	Slinging	Yes	Yes	Slinging	89.8
Short-Range	Summer	FGAV	2024-07-29	790492	5	Floor	Slinging	Yes	Yes	Slinging	109.7
Short-Range	Summer	FGAV	2024-07-29	790492	7	PaxLoc	Passenger	No	No	N/A	437.6
Short-Range	Summer	FGAV	2024-07-29	790492	8	PaxLoc	Passenger	No	No	N/A	494.2
Short-Range	Summer	FGAV	2024-07-29	790492	11	PaxLoc	Passenger	No	Yes	No Reason	242.2
Short-Range	Summer	FGAV	2024-07-30	791217	2	PaxLoc	Passenger	No	Yes	No Reason	107.8
Short-Range	Summer	FGAV	2024-07-30	791217	4	PaxLoc	Passenger	No	Yes	No Reason	160.5
Short-Range	Summer	FGAV	2024-07-30	791217	7	PaxLoc	Passenger	No	Yes	No Reason	186.1
Short-Range	Summer	FGAV	2024-07-30	791217	9	Move	Slinging	Yes	Yes	Slinging	95.9
Short-Range	Summer	FGAV	2024-07-30	791217	10	Move	Slinging	Yes	Yes	Slinging	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-07-31	792043	2	PaxLoc	Passenger	No	Yes	No Reason	183.7
Short-Range	Summer	FGAV	2024-07-31	792043	3	PaxLoc	Passenger	No	Yes	No Reason	230.8
Short-Range	Summer	FGAV	2024-07-31	792043	4	PaxLoc	Passenger	No	Yes	No Reason	200.1
Short-Range	Summer	FGAV	2024-07-31	792043	5	PaxLoc	Passenger	No	Yes	No Reason	253.3
Short-Range	Summer	FGAV	2024-07-31	792043	7	Floor	Slinging	Yes	Yes	Slinging	88.0
Short-Range	Summer	FGAV	2024-07-31	792043	9	PaxLoc	Passenger	No	Yes	No Reason	231.0
Short-Range	Summer	FGAV	2024-08-01	792787	2	PaxLoc	Passenger	No	No	N/A	320.8

Table E-1: 2024 Helicopter Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FGAV	2024-08-01	792787	3	LocSlng	Slinging	Yes	Yes	Slinging	216.1
Short-Range	Summer	FGAV	2024-08-01	792787	8	Move	Slinging	Yes	Yes	Slinging	91.2
Short-Range	Summer	FGAV	2024-08-01	792787	10	PaxLoc	Passenger	No	Yes	No Reason	216.7
Short-Range	Summer	FGAV	2024-08-02	793536	2	PaxLoc	Passenger	No	No	N/A	307.3
Short-Range	Summer	FGAV	2024-08-02	793536	3	PaxLoc	Passenger	No	Yes	No Reason	287.8
Short-Range	Summer	FGAV	2024-08-02	793536	5	PaxLoc	Passenger	No	Yes	No Reason	180.0
Short-Range	Summer	FGAV	2024-08-02	793536	7	Floor	Slinging	Yes	Yes	Slinging	108.3
Short-Range	Summer	FGAV	2024-08-02	793536	9	PaxLoc	Passenger	No	No	N/A	374.9
Short-Range	Summer	FGAV	2024-08-03	794121	2	PaxLoc	Passenger	No	Yes	No Reason	260.1
Short-Range	Summer	FGAV	2024-08-03	794121	4	Move	Slinging	Yes	Yes	Slinging	93.4
Short-Range	Summer	FGAV	2024-08-03	794121	5	Move	Slinging	Yes	Yes	Slinging	122.8
Short-Range	Summer	FGAV	2024-08-03	794121	9	PaxLoc	Passenger	No	No	N/A	300.7
Short-Range	Summer	FGAV	2024-08-04	794787	3	PaxLoc	Passenger	No	No	N/A	311.7
Short-Range	Summer	FGAV	2024-08-04	794787	5	Floor	Slinging	Yes	Yes	Slinging	99.0
Short-Range	Summer	FGAV	2024-08-04	794787	6	Move	Slinging	Yes	Yes	Slinging	91.5
Short-Range	Summer	FGAV	2024-08-04	794787	7	Move	Slinging	Yes	Yes	Slinging	90.2
Short-Range	Summer	FGAV	2024-08-05	795616	3	PaxLoc	Passenger	No	Yes	No Reason	146.2
Short-Range	Summer	FGAV	2024-08-05	795616	4	PaxLoc	Passenger	No	Yes	No Reason	164.8
Short-Range	Summer	FGAV	2024-08-05	795616	5	PaxLoc	Passenger	No	Yes	No Reason	233.6
Short-Range	Summer	FGAV	2024-08-06	796128	3	PaxLoc	Passenger	Yes	Yes	Weather	153.2
Short-Range	Summer	FGAV	2024-08-07	797127	5	PaxLoc	Passenger	No	Yes	No Reason	196.0
Short-Range	Summer	FSVG	2024-08-08	797878	3	PaxLoc	Passenger	No	Yes	No Reason	56.2
Short-Range	Summer	FGAV	2024-08-08	797935	1	PaxLoc	Passenger	No	Yes	Short Flight	183.2
Short-Range	Summer	FGAV	2024-08-08	797935	3	PaxLoc	Passenger	Yes	Yes	Slinging	189.6
Short-Range	Summer	FSVG	2024-08-09	798656	3	PaxLoc	Passenger	No	Yes	No Reason	49.6
Short-Range	Summer	FGAV	2024-08-09	798691	3	Reposition	Slinging	Yes	Yes	Slinging	67.6
Short-Range	Summer	FGAV	2024-08-10	799381	3	PaxLoc	Passenger	Yes	Yes	Smoke	218.4
Short-Range	Summer	FGAV	2024-08-10	799381	8	PaxLoc	Passenger	Yes	Yes	Smoke	294.3
Short-Range	Summer	FGAV	2024-08-11	800002	1	PaxLoc	Passenger	Yes	Yes	Smoke	199.3
Short-Range	Summer	FGAV	2024-08-11	800002	2	PaxLoc	Passenger	Yes	Yes	Smoke	288.3
Short-Range	Summer	FGAV	2024-08-11	800002	7	PaxLoc	Passenger	Yes	Yes	Wildlife Survey	125.2
Short-Range	Summer	FGAV	2024-08-11	800002	8	PaxLoc	Passenger	Yes	Yes	Smoke	205.8
Short-Range	Summer	FGAV	2024-08-14	802315	1	PaxLoc	Passenger	No	Yes	Short Flight	229.0
Short-Range	Summer	FGAV	2024-08-14	802315	4	PaxLoc	Passenger	No	Yes	Short Flight	76.3
Short-Range	Summer	FGAV	2024-08-14	802315	5	PaxLoc	Passenger	No	Yes	Short Flight	67.4
Short-Range	Summer	FGAV	2024-08-14	802315	6	PaxLoc	Passenger	No	Yes	Short Flight	64.6
Short-Range	Summer	FGAV	2024-08-14	802315	7	PaxLoc	Passenger	No	Yes	Short Flight	54.2
Short-Range	Summer	FGAV	2024-08-14	802315	8	PaxLoc	Passenger	Yes	Yes	Weather	176.7
Short-Range	Summer	FGAV	2024-08-17	805102	2	PaxLoc	Passenger	Yes	Yes	Weather	75.6
Short-Range	Summer	FGAV	2024-08-17	805102	3	PaxLoc	Passenger	Yes	Yes	Weather	171.0
Short-Range	Summer	FGAV	2024-08-17	805102	4	PaxLoc	Passenger	No	Yes	Short Flight	234.6
Short-Range	Summer	FGAV	2024-08-17	805102	5	PaxLoc	Passenger	No	Yes	No Reason	238.6
Short-Range	Summer	FGAV	2024-08-17	805102	6	Reposition	Slinging	Yes	No	Slinging	391.9
Short-Range	Summer	FGAV	2024-08-17	805102	7	GenSlng	Slinging	Yes	No	Slinging	431.0
Short-Range	Summer	FGAV	2024-08-17	805102	8	PaxLoc	Passenger	No	No	N/A	344.1
Short-Range	Summer	FGAV	2024-08-17	805102	9	PaxLoc	Passenger	No	No	N/A	350.2
Short-Range	Summer	FGAV	2024-08-17	805102	10	PaxLoc	Passenger	No	No	No Reason	328.9
Short-Range	Summer	FGAV	2024-08-24	809681	1	Pax	Passenger	No	Yes	No Reason	273.0
Short-Range	Summer	FGAV	2024-08-24	809681	2	Pax	Passenger	No	Yes	Short Flight	146.5
Short-Range	Summer	FGAV	2024-08-24	809681	3	Pax	Passenger	No	Yes	No Reason	228.4
Short-Range	Summer	FGAV	2024-08-26	811533	1	NoRevenu	NoRevenu	Yes	Yes	Short Flight	237.1
Short-Range	Summer	FGAV	2024-08-26	811533	5	Pax	Passenger	No	Yes	Short Flight	190.7
Short-Range	Summer	FGAV	2024-08-26	811533	6	LocSlng	Slinging	Yes	Yes	Slinging	196.8
Short-Range	Summer	FGAV	2024-08-27	812060	1	PaxLoc	Passenger	No	Yes	Short Flight	211.1

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FGAV	2024-08-27	812060	2	LocSlng	Slinging	Yes	Yes	Slinging	164.6
Short-Range	Summer	FGAV	2024-08-27	812060	4	PaxLoc	Passenger	No	No	N/A	301.2
Short-Range	Summer	FGAV	2024-08-27	812060	6	PaxLoc	Passenger	No	Yes	Short Flight	211.9
Short-Range	Summer	FGAV	2024-08-27	812060	7	PaxLoc	Passenger	No	Yes	Short Flight	248.7
Short-Range	Summer	FGAV	2024-08-27	812060	8	LocSlng	Slinging	Yes	Yes	Slinging	183.3
Short-Range	Summer	FGAV	2024-08-28	812355	1	NoRevenu	NoRevenu	Yes	Yes	Short Flight	232.3
Short-Range	Summer	FGAV	2024-08-28	812355	2	PaxLoc	Passenger	No	Yes	Short Flight	148.6
Short-Range	Summer	FGAV	2024-08-28	812355	3	Wildlife	Wildlife	Yes	No	Wildlife Survey	409.3
Short-Range	Summer	FGAV	2024-08-28	812355	4	PaxLoc	Passenger	No	Yes	Short Flight	238.3
Short-Range	Summer	FGAV	2024-08-28	812355	5	PaxLoc	Passenger	No	Yes	Short Flight	127.1
Short-Range	Summer	FGAV	2024-08-30	813885	2	PaxLoc	Passenger	Yes	Yes	Weather	106.0
Short-Range	Summer	FGAV	2024-08-30	813885	3	PaxLoc	Passenger	Yes	Yes	Weather	137.6
Short-Range	Summer	FGAV	2024-08-30	813885	4	PaxLoc	Passenger	Yes	Yes	Weather	111.3
Short-Range	Summer	FGAV	2024-08-31	814486	1	PaxLoc	Passenger	No	Yes	No Reason	169.7
Short-Range	Summer	FGAV	2024-08-31	814486	2	PaxLoc	Passenger	No	Yes	No Reason	247.1
Short-Range	Summer	FGAV	2024-08-31	814486	3	PaxLoc	Passenger	No	Yes	No Reason	193.3
Short-Range	Summer	FGAV	2024-08-31	814486	4	Floor	Slinging	Yes	Yes	Slinging	175.0
Short-Range	Summer	FGAV	2024-08-31	814486	5	Move	Slinging	Yes	Yes	Slinging	171.2
Short-Range	Summer	FGAV	2024-08-31	814486	6	PaxLoc	Passenger	No	Yes	No Reason	270.8
Short-Range	Summer	FGAV	2024-08-31	814486	7	DrillServ	Slinging	Yes	No	Slinging	322.1
Short-Range	Summer	FGAV	2024-08-31	814486	9	PaxLoc	Passenger	No	No	N/A	306.0
Short-Range	Summer	FGAV	2024-08-31	814486	10	PaxLoc	Passenger	No	Yes	No Reason	201.1
Short-Range	Summer	FGAV	2024-08-31	814486	11	PaxLoc	Passenger	No	No	N/A	344.2
Short-Range	Summer	FGAV	2024-08-31	814486	12	CrewChg	Passenger	No	No	N/A	318.3
Short-Range	Summer	FGAV	2024-09-01	814927	1	CrewChg	Passenger	No	Yes	No Reason	266.6
Short-Range	Summer	FGAV	2024-09-01	814927	2	PaxLoc	Passenger	No	No	N/A	319.8
Short-Range	Summer	FGAV	2024-09-01	814927	3	PaxLoc	Passenger	No	Yes	No Reason	77.9
Short-Range	Summer	FGAV	2024-09-01	814927	4	DrillServ	Slinging	Yes	Yes	Slinging	46.5
Short-Range	Summer	FGAV	2024-09-01	814927	6	Floor	Slinging	Yes	Yes	Slinging	164.7
Short-Range	Summer	FGAV	2024-09-01	814927	7	PaxLoc	Passenger	No	Yes	No Reason	259.5
Short-Range	Summer	FGAV	2024-09-01	814927	8	PaxLoc	Passenger	No	Yes	No Reason	163.0
Short-Range	Summer	FNDN	2024-09-01	815307	2	PaxLoc	Passenger	No	Yes	Short Flight	60.1
Short-Range	Summer	FNDN	2024-09-01	815307	3	Floor	Slinging	Yes	Yes	Slinging	154.1
Short-Range	Summer	FNDN	2024-09-01	815307	4	LocSlng	Slinging	Yes	Yes	Slinging	192.9
Short-Range	Summer	FNDN	2024-09-01	815307	5	PaxLoc	Passenger	No	Yes	Short Flight	173.4
Short-Range	Summer	FNDN	2024-09-01	815307	6	CrewChg	Passenger	No	No	No Reason	325.1
Short-Range	Summer	FNDN	2024-09-01	815307	7	DrillServ	Slinging	Yes	Yes	Slinging	225.0
Short-Range	Summer	FGAV	2024-09-02	815356	1	CrewChg	Passenger	No	Yes	No Reason	186.6
Short-Range	Summer	FGAV	2024-09-02	815356	2	PaxLoc	Passenger	No	Yes	No Reason	116.8
Short-Range	Summer	FGAV	2024-09-02	815356	3	DrillServ	Slinging	Yes	Yes	Slinging	165.7
Short-Range	Summer	FGAV	2024-09-02	815356	4	Reposition	Slinging	Yes	Yes	Slinging	51.7
Short-Range	Summer	FGAV	2024-09-02	815356	5	PaxLoc	Passenger	No	Yes	No Reason	172.3
Short-Range	Summer	FGAV	2024-09-02	815356	6	PaxLoc	Passenger	No	Yes	No Reason	199.7
Short-Range	Summer	FGAV	2024-09-02	815356	7	PaxLoc	Passenger	No	Yes	No Reason	127.1
Short-Range	Summer	FNDN	2024-09-02	815561	2	PaxLoc	Passenger	No	Yes	Short Flight	51.4
Short-Range	Summer	FNDN	2024-09-02	815561	3	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-09-02	815561	4	CrewChg	Passenger	Yes	Yes	Weather	164.8
Short-Range	Summer	FGAV	2024-09-03	816137	1	CrewChg	Passenger	No	Yes	No Reason	248.6
Short-Range	Summer	FGAV	2024-09-03	816137	2	Core	Slinging	Yes	Yes	Slinging	232.9
Short-Range	Summer	FGAV	2024-09-03	816137	3	PaxLoc	Passenger	No	Yes	No Reason	250.3
Short-Range	Summer	FGAV	2024-09-03	816137	4	PaxLoc	Passenger	No	Yes	No Reason	194.6
Short-Range	Summer	FGAV	2024-09-03	816137	5	PaxLoc	Passenger	No	No	N/A	434.9
Short-Range	Summer	FGAV	2024-09-03	816137	6	Move	Slinging	Yes	Yes	Slinging	119.7

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FGAV	2024-09-03	816137	7	PaxLoc	Passenger	No	Yes	No Reason	163.4
Short-Range	Summer	FGAV	2024-09-03	816137	8	DrillServ	Slinging	Yes	Yes	Slinging	226.2
Short-Range	Summer	FGAV	2024-09-03	816137	9	CrewChg	Passenger	No	Yes	No Reason	290.2
Short-Range	Summer	FNDN	2024-09-03	816143	3	Reposition	Slinging	Yes	Yes	Slinging	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-09-03	816143	4	Move	Slinging	Yes	Yes	Slinging	105.3
Short-Range	Summer	FGAV	2024-09-04	816621	1			No	No	N/A	328.2
Short-Range	Summer	FGAV	2024-09-04	816621	3	CrewChg	Passenger	No	Yes	No Reason	159.9
Short-Range	Summer	FGAV	2024-09-04	816621	4	CrewChg	Passenger	No	Yes	No Reason	170.7
Short-Range	Summer	FGAV	2024-09-04	816632	1	CrewChg	Passenger	No	Yes	No Reason	223.7
Short-Range	Summer	FGAV	2024-09-05	817083	1	CrewChg	Passenger	No	Yes	No Reason	95.9
Short-Range	Summer	FGAV	2024-09-05	817083	2	PaxLoc	Passenger	Yes	Yes	Weather	78.2
Short-Range	Summer	FGAV	2024-09-05	817083	3	Floor	Slinging	Yes	Yes	Slinging	121.4
Short-Range	Summer	FGAV	2024-09-05	817083	4	Floor	Slinging	Yes	Yes	Slinging	101.8
Short-Range	Summer	FGAV	2024-09-05	817083	5	Move	Slinging	Yes	Yes	Slinging	116.4
Short-Range	Summer	FGAV	2024-09-05	817083	6	Move	Slinging	Yes	Yes	Slinging	122.6
Short-Range	Summer	FGAV	2024-09-05	817083	7	Move	Slinging	Yes	Yes	Slinging	115.0
Short-Range	Summer	FGAV	2024-09-05	817083	8	Move	Slinging	Yes	Yes	Slinging	108.8
Short-Range	Summer	FGAV	2024-09-05	817083	9	CrewChg	Passenger	No	Yes	No Reason	136.1
Short-Range	Summer	FGAV	2024-09-06	817696	1	CrewChg	Passenger	No	Yes	No Reason	170.2
Short-Range	Summer	FGAV	2024-09-06	817696	2	CrewChg	Passenger	No	Yes	No Reason	167.4
Short-Range	Summer	FGAV	2024-09-06	817696	3	DrillServ	Slinging	Yes	Yes	Slinging	125.9
Short-Range	Summer	FGAV	2024-09-06	817696	6	PaxLoc	Passenger	No	Yes	No Reason	104.1
Short-Range	Summer	FGAV	2024-09-06	817696	7	PaxLoc	Passenger	No	Yes	No Reason	183.9
Short-Range	Summer	FGAV	2024-09-06	817696	8	PaxLoc	Passenger	No	Yes	No Reason	168.8
Short-Range	Summer	FGAV	2024-09-06	817696	9	PaxLoc	Passenger	No	Yes	No Reason	114.5
Short-Range	Summer	FGAV	2024-09-06	817696	10	CrewChg	Passenger	No	Yes	No Reason	164.8
Short-Range	Summer	FGAV	2024-09-07	818299	1	CrewChg	Passenger	No	Yes	No Reason	141.2
Short-Range	Summer	FGAV	2024-09-07	818299	2	Floor	Slinging	Yes	Yes	Slinging	109.0
Short-Range	Summer	FGAV	2024-09-07	818299	3	DrillServ	Slinging	Yes	Yes	Slinging	149.4
Short-Range	Summer	FGAV	2024-09-07	818299	4	PaxLoc	Passenger	No	Yes	No Reason	106.9
Short-Range	Summer	FGAV	2024-09-07	818299	5	DrillServ	Slinging	Yes	Yes	Slinging	143.1
Short-Range	Summer	FGAV	2024-09-07	818299	6	PaxLoc	Passenger	No	Yes	No Reason	190.1
Short-Range	Summer	FGAV	2024-09-07	818299	7	CrewChg	Passenger	No	Yes	No Reason	206.9
Short-Range	Summer	FGAV	2024-09-08	818850	1	Core	Slinging	Yes	Yes	Slinging	166.8
Short-Range	Summer	FGAV	2024-09-08	818850	2	PaxLoc	Passenger	No	Yes	No Reason	136.8
Short-Range	Summer	FGAV	2024-09-08	818850	3	PaxLoc	Passenger	No	Yes	No Reason	73.3
Short-Range	Summer	FGAV	2024-09-08	818850	4	PaxLoc	Passenger	No	Yes	No Reason	127.8
Short-Range	Summer	FGAV	2024-09-08	818850	5	PaxLoc	Passenger	No	Yes	No Reason	145.5
Short-Range	Summer	FGAV	2024-09-08	818850	6	Move	Slinging	Yes	Yes	Slinging	87.4
Short-Range	Summer	FGAV	2024-09-08	818850	7	DrillServ	Slinging	Yes	Yes	Slinging	174.8
Short-Range	Summer	FGAV	2024-09-08	818850	8	CrewChg	Passenger	Yes	Yes	Weather	85.5
Short-Range	Summer	FGAV	2024-09-09	819379	1	CrewChg	Passenger	Yes	Yes	Weather	72.4
Short-Range	Summer	FGAV	2024-09-09	819379	2	PaxLoc	Passenger	Yes	Yes	Weather	95.1
Short-Range	Summer	FGAV	2024-09-09	819379	3	Reposition	Slinging	Yes	Yes	Slinging	52.3
Short-Range	Summer	FGAV	2024-09-09	819379	6	Floor	Slinging	Yes	Yes	Slinging	106.6
Short-Range	Summer	FGAV	2024-09-09	819379	7	Floor	Slinging	Yes	Yes	Slinging	82.9
Short-Range	Summer	FGAV	2024-09-09	819379	8	CrewChg	Passenger	Yes	Yes	Weather	74.5
Short-Range	Summer	FGAV	2024-09-10	820004	1	CrewChg	Passenger	Yes	Yes	Weather	101.5
Short-Range	Summer	FGAV	2024-09-11	820640	1	CrewChg	Passenger	Yes	Yes	Weather	127.2
Short-Range	Summer	FGAV	2024-09-12	821323	1	CrewChg	Passenger	Yes	Yes	Weather	95.1
Short-Range	Summer	FGAV	2024-09-12	821323	2	PaxLoc	Passenger	Yes	Yes	Weather	75.9
Short-Range	Summer	FGAV	2024-09-12	821323	3	PaxLoc	Passenger	No	Yes	No Reason	166.8
Short-Range	Summer	FGAV	2024-09-12	821323	4	Move	Slinging	Yes	Yes	Slinging	90.8

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FGAV	2024-09-12	821323	5	Core	Slinging	Yes	Yes	Slinging	135.0
Short-Range	Summer	FGAV	2024-09-12	821323	6	PaxLoc	Passenger	No	Yes	No Reason	206.7
Short-Range	Summer	FGAV	2024-09-12	821323	7	DrillServ	Slinging	Yes	Yes	Slinging	191.3
Short-Range	Summer	FGAV	2024-09-12	821323	8	CrewChg	Passenger	No	Yes	No Reason	216.0
Short-Range	Summer	FNDN	2024-09-12	821719	1	PaxLoc	Passenger	No	No	N/A	411.5
Short-Range	Summer	FGAV	2024-09-13	821965	1	CrewChg	Passenger	Yes	Yes	Weather	58.5
Short-Range	Summer	FGAV	2024-09-13	821965	2	PaxLoc	Passenger	Yes	Yes	Weather	75.8
Short-Range	Summer	FGAV	2024-09-13	821965	3	Core	Slinging	Yes	Yes	Slinging	132.6
Short-Range	Summer	FGAV	2024-09-13	821965	5	CrewChg	Passenger	Yes	Yes	Weather	156.3
Short-Range	Summer	FGAV	2024-09-14	822536	1	CrewChg	Passenger	Yes	Yes	Weather	98.7
Short-Range	Summer	FGAV	2024-09-14	822536	2	PaxLoc	Passenger	Yes	Yes	Weather	65.8
Short-Range	Summer	FGAV	2024-09-14	822536	3	PaxLoc	Passenger	Yes	Yes	Weather	98.0
Short-Range	Summer	FGAV	2024-09-14	822536	4	PaxLoc	Passenger	Yes	Yes	Weather	104.6
Short-Range	Summer	FGAV	2024-09-14	822536	5	Move	Slinging	Yes	Yes	Slinging	96.2
Short-Range	Summer	FGAV	2024-09-14	822536	6	Floor	Slinging	Yes	Yes	Slinging	159.0
Short-Range	Summer	FGAV	2024-09-14	822536	7	DrillServ	Slinging	Yes	Yes	Slinging	210.4
Short-Range	Summer	FGAV	2024-09-14	822536	8	CrewChg	Passenger	No	Yes	No Reason	151.7
Short-Range	Summer	FNDN	2024-09-14	822762	1	Core	Slinging	Yes	Yes	Slinging	110.3
Short-Range	Summer	FNDN	2024-09-14	822762	2	Floor	Slinging	Yes	Yes	Slinging	144.0
Short-Range	Summer	FNDN	2024-09-14	822762	3	DrillServ	Slinging	Yes	Yes	Slinging	212.9
Short-Range	Summer	FGAV	2024-09-15	823062	1	CrewChg	Passenger	Yes	Yes	Weather	118.9
Short-Range	Summer	FGAV	2024-09-15	823062	2	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-09-15	823062	3	Core	Slinging	Yes	Yes	Slinging	148.1
Short-Range	Summer	FGAV	2024-09-15	823062	4	PaxLoc	Passenger	Yes	Yes	Weather	125.6
Short-Range	Summer	FGAV	2024-09-15	823062	5	PaxLoc	Passenger	Yes	Yes	Weather	98.6
Short-Range	Summer	FGAV	2024-09-15	823062	6	CrewChg	Passenger	Yes	Yes	Weather	140.4
Short-Range	Summer	FGAV	2024-09-16	823533	1	DrillServ	Slinging	Yes	Yes	Slinging	204.2
Short-Range	Summer	FGAV	2024-09-16	823533	2	PaxLoc	Passenger	No	Yes	No Reason	173.1
Short-Range	Summer	FGAV	2024-09-16	823533	3	Move	Slinging	Yes	Yes	Slinging	126.8
Short-Range	Summer	FGAV	2024-09-16	823533	4	Move	Slinging	Yes	Yes	Slinging	121.9
Short-Range	Summer	FGAV	2024-09-16	823533	5	PaxLoc	Passenger	No	No	N/A	306.3
Short-Range	Summer	FGAV	2024-09-16	823533	6	LocSlng	Slinging	Yes	No	Slinging	329.9
Short-Range	Summer	FGAV	2024-09-16	823533	7	CrewChg	Passenger	No	Yes	No Reason	225.8
Short-Range	Summer	FNDN	2024-09-16	823907	1	PaxLoc	Passenger	No	Yes	N/A	29.4
Short-Range	Summer	FNDN	2024-09-16	823907	4	Move	Slinging	Yes	Yes	Slinging	105.3
Short-Range	Summer	FGAV	2024-09-17	824164	1	DrillServ	Slinging	Yes	Yes	Slinging	146.4
Short-Range	Summer	FGAV	2024-09-17	824164	2	PaxLoc	Passenger	Yes	Yes	Weather	209.2
Short-Range	Summer	FGAV	2024-09-17	824164	3	PaxLoc	Passenger	No	Yes	No Reason	99.1
Short-Range	Summer	FGAV	2024-09-17	824164	4	PaxLoc	Passenger	Yes	Yes	Weather	112.1
Short-Range	Summer	FGAV	2024-09-17	824164	5	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-09-17	824164	6	DrillServ	Slinging	Yes	Yes	Slinging	207.3
Short-Range	Summer	FGAV	2024-09-17	824164	7	CrewChg	Passenger	No	No	N/A	353.3
Short-Range	Summer	FNDN	2024-09-17	824384	1	PaxLoc	Passenger	No	Yes	Weather	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FNDN	2024-09-17	824384	3	PaxLoc	Passenger	Yes	Yes	Weather	159.1
Short-Range	Summer	FGAV	2024-09-18	824796	1	CrewChg	Passenger	Yes	Yes	Weather	128.0
Short-Range	Summer	FGAV	2024-09-18	824796	2	CrewChg	Passenger	Yes	Yes	Weather	90.2
Short-Range	Summer	FGAV	2024-09-19	825446	1	Core	Slinging	Yes	Yes	Slinging	136.2
Short-Range	Summer	FGAV	2024-09-19	825446	2	PaxLoc	Passenger	No	Yes	No Reason	186.6
Short-Range	Summer	FGAV	2024-09-19	825446	3	Move	Slinging	Yes	Yes	Slinging	132.0
Short-Range	Summer	FGAV	2024-09-19	825446	4	Move	Slinging	Yes	Yes	Slinging	96.5
Short-Range	Summer	FGAV	2024-09-19	825446	5	Floor	Slinging	Yes	Yes	Slinging	133.3

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Summer	FGAV	2024-09-19	825446	6	PaxLoc	Passenger	No	Yes	N/A	128.2
Short-Range	Summer	FGAV	2024-09-19	825446	7	PaxLoc	Passenger	No	Yes	No Reason	269.3
Short-Range	Summer	FGAV	2024-09-19	825446	8	CrewChg	Passenger	No	Yes	No Reason	261.4
Short-Range	Summer	FNDN	2024-09-19	825761	2	PaxLoc	Passenger	Yes	Yes	Weather/Short Flight	129.3
Short-Range	Summer	FNDN	2024-09-19	825761	5	PaxLoc	Passenger	No	Yes	N/A	25.5
Short-Range	Summer	FNDN	2024-09-19	825761	7	PaxLoc	Passenger	No	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-09-20	826042	1	CrewChg	Passenger	No	Yes	No Reason	168.3
Short-Range	Summer	FGAV	2024-09-20	826042	2	DrillServ	Slinging	Yes	Yes	Slinging	127.0
Short-Range	Summer	FGAV	2024-09-20	826042	3	PaxLoc	Passenger	Yes	Yes	Weather	77.7
Short-Range	Summer	FGAV	2024-09-20	826042	4	PaxLoc	Passenger	Yes	Yes	Weather	200.2
Short-Range	Summer	FGAV	2024-09-20	826042	5	DrillServ	Slinging	Yes	Yes	Slinging	172.4
Short-Range	Summer	FGAV	2024-09-20	826042	6	CrewChg	Passenger	No	Yes	No Reason	217.5
Short-Range	Summer	FGAV	2024-09-21	826675	1	CrewChg	Passenger	Yes	Yes	Weather	98.9
Short-Range	Summer	FGAV	2024-09-21	826675	2	PaxLoc	Passenger	Yes	Yes	Weather	74.2
Short-Range	Summer	FGAV	2024-09-21	826675	3	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Summer	FGAV	2024-09-21	826675	4	PaxLoc	Passenger	Yes	Yes	Weather	93.6
Short-Range	Summer	FGAV	2024-09-21	826675	5	PaxLoc	Passenger	No	Yes	No Reason	173.6
Short-Range	Summer	FGAV	2024-09-21	826675	6	Move	Slinging	Yes	Yes	Slinging	91.6
Short-Range	Summer	FGAV	2024-09-21	826675	7	CrewChg	Passenger	Yes	Yes	Weather	98.1
Short-Range	Fall	FGAV	2024-09-22	827077	1	CrewChg	Passenger	Yes	Yes	Weather	68.4
Short-Range	Fall	FGAV	2024-09-22	827077	2	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Fall	FGAV	2024-09-22	827077	3	Ferry	Ferry	Yes	Yes	Weather	99.6
Short-Range	Fall	FGAV	2024-09-23	827584	1	CrewChg	Passenger	Yes	Yes	Weather	78.8
Short-Range	Fall	FGAV	2024-09-23	827584	2	Reposition	Slinging	Yes	Yes	Slinging	47.4
Short-Range	Fall	FGAV	2024-09-23	827584	3	PaxLoc	Passenger	Yes	Yes	Weather	67.2
Short-Range	Fall	FGAV	2024-09-23	827584	4	DrillServ	Slinging	Yes	Yes	Slinging	167.6
Short-Range	Fall	FGAV	2024-09-23	827584	5	CrewChg	Passenger	Yes	Yes	Weather	127.5
Short-Range	Fall	FNDN	2024-09-23	827866	1	DrillServ	Slinging	Yes	Yes	Slinging	132.9
Short-Range	Fall	FNDN	2024-09-24	828271	1	CrewChg	Passenger	Yes	Yes	Weather	61.0
Short-Range	Fall	FNDN	2024-09-24	828271	3	Core	Slinging	Yes	Yes	Slinging	134.1
Short-Range	Fall	FNDN	2024-09-24	828271	4	Reposition	Slinging	Yes	Yes	No Reason	Full flight too low to distinguish from takeoff/landing
Short-Range	Fall	FNDN	2024-09-24	828271	5	PaxLoc	Passenger	Yes	Yes	Weather	66.7
Short-Range	Fall	FNDN	2024-09-24	828271	6	PaxLoc	Passenger	Yes	Yes	Weather	81.5
Short-Range	Fall	FNDN	2024-09-24	828271	7	Move	Slinging	Yes	Yes	Slinging	146.3
Short-Range	Fall	FNDN	2024-09-24	828271	8	Move	Slinging	Yes	Yes	Slinging	106.8
Short-Range	Fall	FNDN	2024-09-24	828271	9	Move	Slinging	Yes	Yes	Slinging	144.9
Short-Range	Fall	FGAV	2024-09-24	828372	2	PaxLoc	Passenger	Yes	Yes	Weather	148.2
Short-Range	Fall	FGAV	2024-09-24	828372	4	Move	Slinging	Yes	Yes	Slinging	136.8
Short-Range	Fall	FGAV	2024-09-24	828372	5	Move	Slinging	Yes	Yes	Slinging	161.5
Short-Range	Fall	FNDN	2024-09-25	829102	1	Move	Slinging	Yes	Yes	Slinging	155.6
Short-Range	Fall	FNDN	2024-09-25	829102	2	Move	Slinging	Yes	Yes	Slinging	165.7
Short-Range	Fall	FNDN	2024-09-25	829102	3	Move	Slinging	Yes	Yes	Slinging	163.0
Short-Range	Fall	FGAV	2024-09-25	829104	1	PaxLoc	Passenger	Yes	Yes	Weather	105.5
Short-Range	Fall	FGAV	2024-09-25	829104	3	Move	Slinging	Yes	Yes	Slinging	170.9
Short-Range	Fall	FGAV	2024-09-25	829104	4	Move	Slinging	Yes	Yes	Slinging	194.9
Short-Range	Fall	FGAV	2024-09-26	829638	2	PaxLoc	Passenger	Yes	Yes	Weather	144.6
Short-Range	Fall	FGAV	2024-09-26	829638	4	Move	Slinging	Yes	Yes	Slinging	Full flight too low to distinguish from takeoff/landing
Short-Range	Fall	FGAV	2024-09-26	829638	5	Move	Slinging	Yes	Yes	Slinging	161.7
Short-Range	Fall	FGAV	2024-09-26	829638	6	PaxLoc	Passenger	Yes	Yes	Weather	111.2

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Short-Range	Fall	FGAV	2024-09-26	829638	10	PaxLoc	Passenger	No	Yes	N/A	47.9
Long-Range	Spring	FNDN	2024-04-21	735761	1	SAR	SAR	Yes	Yes	No Reason	62.7
Long-Range	Spring	FNDN	2024-04-22	736147	1	Ferry	Ferry	No	No	N/A	820.9
Long-Range	Spring	FNDN	2024-05-23	749224	2	Wildlife	Wildlife	Yes	Yes	No Reason	205.3
Long-Range	Spring	FNDN	2024-05-23	749224	3	Wildlife	Wildlife	Yes	Yes	No Reason	244.6
Long-Range	Spring	FNDN	2024-05-23	749224	4	PaxLoc	Passenger	No	Yes	No Reason	247.1
Long-Range	Spring	GUIT	2024-05-24	749840	2	Wildlife	Wildlife	Yes	Yes	Wildlife Survey	152.6
Long-Range	Spring	GUIT	2024-05-24	749840	6	Wildlife	Wildlife	Yes	Yes	Wildlife Survey	137.8
Long-Range	Spring	GUIT	2024-05-25	750164	1	Wildlife	Wildlife	Yes	Yes	Wildlife Survey	315.8
Long-Range	Summer	GUIT	2024-05-27	751255	2	PaxLoc	Passenger	No	Yes	N/A	426.1
Long-Range	Summer	GUIT	2024-05-27	751255	3	PaxLoc	Passenger	No	Yes	N/A	554.7
Long-Range	Summer	FNDN	2024-05-31	753139	6	PaxLoc	Passenger	No	Yes	No Reason	309.4
Long-Range	Summer	FNDN	2024-05-31	753139	7	PaxLoc	Passenger	No	Yes	No Reason	542.9
Long-Range	Summer	FNDN	2024-06-01	753504	6	PaxLoc	Passenger	No	Yes	No Reason	618.8
Long-Range	Summer	FNDN	2024-06-01	753504	8	PaxLoc	Passenger	No	Yes	No Reason	275.1
Long-Range	Summer	FNDN	2024-06-05	755252	5	PaxLoc	Passenger	No	Yes	N/A	538.3
Long-Range	Summer	FNDN	2024-06-05	755252	6	PaxLoc	Passenger	No	No	No Reason	716.7
Long-Range	Summer	GUIT	2024-06-05	755284	5	PaxLoc	Passenger	No	Yes	No Reason	364.8
Long-Range	Summer	GUIT	2024-06-05	755284	7	PaxLoc	Passenger	No	No	N/A	693.6
Long-Range	Summer	GUIT	2024-06-05	755284	8	PaxLoc	Passenger	No	No	N/A	688.9
Long-Range	Summer	FNDN	2024-06-07	756411	4	Medevac	Medevac	Yes	Yes	No Reason	433.4
Long-Range	Summer	GUIT	2024-06-08	756954	4	Move	Slinging	Yes	Yes	Slinging	174.3
Long-Range	Summer	GUIT	2024-06-08	756954	5	Core	Slinging	Yes	Yes	Slinging	360.5
Long-Range	Summer	GUIT	2024-06-08	756954	6	Move	Slinging	Yes	Yes	Slinging	234.1
Long-Range	Summer	FNDN	2024-06-08	757063	4	Move	Slinging	Yes	Yes	Slinging	208.0
Long-Range	Summer	FNDN	2024-06-08	757063	7	Move	Slinging	Yes	Yes	Slinging	178.6
Long-Range	Summer	FNDN	2024-06-09	757368	1	CrewChg	Passenger	No	Yes	No Reason	404.9
Long-Range	Summer	FNDN	2024-06-09	757368	3	PaxLoc	Passenger	No	Yes	No Reason	410.4
Long-Range	Summer	GUIT	2024-06-09	757512	2	CrewChg	Passenger	No	Yes	No Reason	348.5
Long-Range	Summer	GUIT	2024-06-10	757901	3	Floor	Slinging	Yes	Yes	Slinging	246.1
Long-Range	Summer	GUIT	2024-06-10	757901	4	CrewChg	Passenger	Yes	Yes	Weather	173.2
Long-Range	Summer	FNDN	2024-06-10	758035	1	CrewChg	Passenger	Yes	Yes	Weather	106.7
Long-Range	Summer	FNDN	2024-06-10	758035	3	Core	Slinging	Yes	Yes	Slinging	186.1
Long-Range	Summer	FNDN	2024-06-10	758035	4	PaxLoc	Passenger	Yes	Yes	Weather	183.6
Long-Range	Summer	FNDN	2024-06-10	758035	5	PaxLoc	Passenger	Yes	Yes	Weather	137.6
Long-Range	Summer	FNDN	2024-06-10	758035	6	PaxLoc	Passenger	Yes	Yes	Weather	425.4
Long-Range	Summer	FNDN	2024-06-10	758035	7	PaxLoc	Passenger	Yes	Yes	Weather	144.7
Long-Range	Summer	GUIT	2024-06-11	758465	5	Floor	Slinging	Yes	Yes	Slinging	250.1
Long-Range	Summer	GUIT	2024-06-11	758465	8	PaxLoc	Passenger	No	Yes	No Reason	333.0
Long-Range	Summer	GUIT	2024-06-11	758465	9	DrillServ	Slinging	Yes	Yes	Slinging	205.1
Long-Range	Summer	FNDN	2024-06-11	758607	2	CrewChg	Passenger	Yes	Yes	Weather	165.3
Long-Range	Summer	FNDN	2024-06-11	758607	3	Core	Slinging	Yes	Yes	Slinging	180.9
Long-Range	Summer	FNDN	2024-06-11	758607	4	PaxLoc	Passenger	Yes	Yes	Weather	143.5
Long-Range	Summer	FNDN	2024-06-11	758607	5	PaxLoc	Passenger	Yes	Yes	Weather	177.4
Long-Range	Summer	FNDN	2024-06-11	758607	6	DrillServ	Slinging	Yes	Yes	Slinging	132.6
Long-Range	Summer	FNDN	2024-06-11	758607	7	PaxLoc	Passenger	Yes	Yes	Weather	213.6
Long-Range	Summer	FNDN	2024-06-11	758607	8	PaxLoc	Passenger	Yes	Yes	Weather	284.5
Long-Range	Summer	FNDN	2024-06-11	758607	10	PaxLoc	Passenger	No	Yes	No Reason	270.3
Long-Range	Summer	GUIT	2024-06-12	759080	3	PaxLoc	Passenger	No	Yes	No Reason	470.0
Long-Range	Summer	GUIT	2024-06-12	759080	4	PaxLoc	Passenger	No	Yes	No Reason	634.6
Long-Range	Summer	FNDN	2024-06-12	759100	1	CrewChg	Passenger	Yes	Yes	Weather	35.7
Long-Range	Summer	FNDN	2024-06-12	759100	2	DrillServ	Slinging	Yes	Yes	Slinging	94.0
Long-Range	Summer	FNDN	2024-06-12	759100	3	Core	Slinging	Yes	Yes	Slinging	173.4
Long-Range	Summer	FNDN	2024-06-12	759100	5	Core	Slinging	Yes	Yes	Slinging	215.5

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	FNDN	2024-06-13	759504	1	CrewChg	Passenger	No	Yes	No Reason	350.7
Long-Range	Summer	FNDN	2024-06-13	759504	4	PaxLoc	Passenger	No	Yes	No Reason	223.5
Long-Range	Summer	FNDN	2024-06-13	759504	5	Core	Slinging	Yes	Yes	Slinging	235.6
Long-Range	Summer	FNDN	2024-06-13	759504	6	DrillServ	Slinging	Yes	Yes	Slinging	277.6
Long-Range	Summer	FNDN	2024-06-13	759504	10	Move	Slinging	Yes	Yes	Slinging	231.2
Long-Range	Summer	GUIT	2024-06-13	760083	6	Move	Slinging	Yes	Yes	Slinging	321.6
Long-Range	Summer	GUIT	2024-06-13	760083	7	PaxLoc	Passenger	No	Yes	No Reason	496.5
Long-Range	Summer	GUIT	2024-06-13	760083	9	PaxLoc	Passenger	No	Yes	No Reason	456.8
Long-Range	Summer	GUIT	2024-06-13	760083	10	PaxLoc	Passenger	No	Yes	No Reason	280.3
Long-Range	Summer	FNDN	2024-06-14	760348	1	CrewChg	Passenger	No	Yes	No Reason	393.4
Long-Range	Summer	FNDN	2024-06-14	760348	2	DrillServ	Slinging	Yes	Yes	Slinging	221.2
Long-Range	Summer	FNDN	2024-06-14	760348	3	PaxLoc	Passenger	No	Yes	No Reason	370.0
Long-Range	Summer	FNDN	2024-06-14	760348	5	Move	Slinging	Yes	Yes	Slinging	331.1
Long-Range	Summer	FNDN	2024-06-14	760348	7	Move	Slinging	Yes	Yes	Slinging	316.1
Long-Range	Summer	FNDN	2024-06-14	760348	8	PaxLoc	Passenger	No	Yes	No Reason	370.4
Long-Range	Summer	FNDN	2024-06-14	760348	9	PaxLoc	Passenger	No	Yes	No Reason	476.8
Long-Range	Summer	GUIT	2024-06-14	760516	1	PaxLoc	Passenger	No	Yes	No Reason	426.8
Long-Range	Summer	GUIT	2024-06-14	760516	2	PaxLoc	Passenger	No	Yes	No Reason	492.4
Long-Range	Summer	GUIT	2024-06-14	760516	4	CrewChg	Passenger	No	Yes	No Reason	552.4
Long-Range	Summer	GUIT	2024-06-14	760516	5	PaxLoc	Passenger	No	Yes	No Reason	601.1
Long-Range	Summer	FNDN	2024-06-15	760814	1	CrewChg	Passenger	Yes	Yes	Weather	203.5
Long-Range	Summer	FNDN	2024-06-15	760814	4	PaxLoc	Passenger	No	Yes	No Reason	272.2
Long-Range	Summer	FNDN	2024-06-15	760814	5	PaxLoc	Passenger	No	Yes	No Reason	386.8
Long-Range	Summer	FNDN	2024-06-15	760814	8	PaxLoc	Passenger	No	Yes	No Reason	489.7
Long-Range	Summer	FNDN	2024-06-15	760814	9	CrewChg	Passenger	No	Yes	No Reason	502.7
Long-Range	Summer	GUIT	2024-06-15	760907	3	Floor	Slinging	Yes	Yes	Slinging	227.7
Long-Range	Summer	GUIT	2024-06-15	760907	4	Floor	Slinging	Yes	Yes	Slinging	377.4
Long-Range	Summer	GUIT	2024-06-15	760907	7	PaxLoc	Passenger	No	No	N/A	660.7
Long-Range	Summer	GUIT	2024-06-15	760907	8	PaxLoc	Passenger	No	Yes	No Reason	486.2
Long-Range	Summer	GUIT	2024-06-16	761146	2	PaxLoc	Passenger	No	Yes	No Reason	347.8
Long-Range	Summer	GUIT	2024-06-16	761146	6	CrewChg	Passenger	No	Yes	No Reason	291.7
Long-Range	Summer	FNDN	2024-06-16	761227	1	CrewChg	Passenger	No	Yes	No Reason	475.2
Long-Range	Summer	FNDN	2024-06-16	761227	2	PaxLoc	Passenger	No	Yes	No Reason	401.1
Long-Range	Summer	FNDN	2024-06-16	761227	4	DrillServ	Slinging	Yes	Yes	Slinging	294.3
Long-Range	Summer	FNDN	2024-06-16	761227	6	DrillServ	Slinging	Yes	Yes	Slinging	234.1
Long-Range	Summer	FNDN	2024-06-16	761227	8	PaxLoc	Passenger	No	Yes	No Reason	428.9
Long-Range	Summer	FNDN	2024-06-16	761227	9	PaxLoc	Passenger	No	Yes	No Reason	524.7
Long-Range	Summer	FNDN	2024-06-16	761227	12	CrewChg	Passenger	No	Yes	No Reason	284.4
Long-Range	Summer	GUIT	2024-06-17	761589	2	Medevac	Medevac	Yes	Yes	No Reason	447.9
Long-Range	Summer	GUIT	2024-06-17	761589	4	PaxLoc	Passenger	No	Yes	No Reason	284.6
Long-Range	Summer	GUIT	2024-06-17	761589	5	CrewChg	Passenger	No	Yes	No Reason	456.0
Long-Range	Summer	FNDN	2024-06-17	761693	1	CrewChg	Passenger	No	Yes	No Reason	487.3
Long-Range	Summer	FNDN	2024-06-17	761693	3	PaxLoc	Passenger	No	Yes	No Reason	453.0
Long-Range	Summer	FNDN	2024-06-17	761693	5	DrillServ	Slinging	Yes	Yes	Slinging	274.7
Long-Range	Summer	FNDN	2024-06-18	762056	1	CrewChg	Passenger	No	Yes	No Reason	369.6
Long-Range	Summer	GUIT	2024-06-18	762259	1	PaxLoc	Passenger	No	Yes	No Reason	516.7
Long-Range	Summer	GUIT	2024-06-18	762259	4	Move	Slinging	Yes	Yes	Slinging	227.5
Long-Range	Summer	GUIT	2024-06-18	762259	5	CrewChg	Passenger	No	Yes	No Reason	412.9
Long-Range	Summer	GUIT	2024-06-18	762259	6	PaxLoc	Passenger	No	No	N/A	675.3
Long-Range	Summer	GUIT	2024-06-18	762259	7	DrillServ	Slinging	Yes	Yes	Slinging	317.4
Long-Range	Summer	FNDN	2024-06-18	762278	2	Move	Slinging	Yes	Yes	Slinging	173.5
Long-Range	Summer	FNDN	2024-06-18	762278	3	Move	Slinging	Yes	Yes	Slinging	477.6
Long-Range	Summer	GUIT	2024-06-19	762741	1	PaxLoc	Passenger	No	Yes	No Reason	444.4
Long-Range	Summer	GUIT	2024-06-19	762741	4	Fuel	Slinging	Yes	Yes	Slinging	263.1

Table E-1: 2024 Helicopter Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	GUIT	2024-06-19	762741	5	CrewChg	Passenger	No	Yes	No Reason	390.5
Long-Range	Summer	GUIT	2024-06-19	762741	6	Core	Slinging	Yes	Yes	Slinging	285.2
Long-Range	Summer	FNDN	2024-06-19	762874	1	CrewChg	Passenger	No	Yes	No Reason	349.7
Long-Range	Summer	FNDN	2024-06-19	762874	12	PaxLoc	Passenger	No	Yes	No Reason	421.7
Long-Range	Summer	FNDN	2024-06-19	762874	13	PaxLoc	Passenger	No	Yes	No Reason	236.5
Long-Range	Summer	FNDN	2024-06-20	763491	1	CrewChg	Passenger	No	Yes	No Reason	562.6
Long-Range	Summer	FNDN	2024-06-20	763491	2	CrewChg	Passenger	No	Yes	No Reason	219.0
Long-Range	Summer	FNDN	2024-06-20	763491	4	Core	Slinging	Yes	Yes	Slinging	286.1
Long-Range	Summer	FNDN	2024-06-20	763491	5	PaxLoc	Passenger	No	Yes	No Reason	622.3
Long-Range	Summer	FNDN	2024-06-20	763491	7	PaxLoc	Passenger	No	Yes	No Reason	390.9
Long-Range	Summer	FNDN	2024-06-20	763491	9	PaxLoc	Passenger	No	Yes	No Reason	274.4
Long-Range	Summer	FNDN	2024-06-20	763491	11	PaxLoc	Passenger	No	Yes	No Reason	349.9
Long-Range	Summer	GUIT	2024-06-20	763598	2	PaxLoc	Passenger	No	Yes	No Reason	336.7
Long-Range	Summer	GUIT	2024-06-20	763598	4	Move	Slinging	Yes	Yes	Slinging	139.2
Long-Range	Summer	GUIT	2024-06-20	763598	5	CrewChg	Passenger	No	Yes	No Reason	334.9
Long-Range	Summer	GUIT	2024-06-20	763598	6	PaxLoc	Passenger	No	Yes	No Reason	432.8
Long-Range	Summer	GUIT	2024-06-20	763598	7	PaxLoc	Passenger	No	Yes	No Reason	410.3
Long-Range	Summer	GUIT	2024-06-21	763990	1	PaxLoc	Passenger	No	Yes	No Reason	481.9
Long-Range	Summer	GUIT	2024-06-21	763990	2	Floor	Slinging	Yes	Yes	Slinging	278.9
Long-Range	Summer	GUIT	2024-06-21	763990	3	PaxLoc	Passenger	No	Yes	No Reason	300.2
Long-Range	Summer	GUIT	2024-06-21	763990	4	CrewChg	Passenger	No	Yes	No Reason	459.8
Long-Range	Summer	FNDN	2024-06-21	764182	1	CrewChg	Passenger	No	Yes	No Reason	137.3
Long-Range	Summer	GUIT	2024-06-22	764685	1	Core	Slinging	Yes	Yes	Slinging	328.4
Long-Range	Summer	GUIT	2024-06-22	764685	2	PaxLoc	Passenger	No	Yes	No Reason	271.2
Long-Range	Summer	GUIT	2024-06-22	764685	5	Move	Slinging	Yes	Yes	Slinging	193.4
Long-Range	Summer	GUIT	2024-06-22	764685	6	CrewChg	Passenger	No	Yes	No Reason	457.9
Long-Range	Summer	GUIT	2024-06-22	764685	7	PaxLoc	Passenger	No	Yes	No Reason	561.0
Long-Range	Summer	GUIT	2024-06-22	764685	8	PaxLoc	Passenger	No	Yes	No Reason	393.1
Long-Range	Summer	FNDN	2024-06-22	764734	1	CrewChg	Passenger	No	Yes	No Reason	488.6
Long-Range	Summer	FNDN	2024-06-22	764734	3	PaxLoc	Passenger	No	Yes	No Reason	343.5
Long-Range	Summer	FNDN	2024-06-22	764734	4	PaxLoc	Passenger	No	Yes	No Reason	401.7
Long-Range	Summer	FNDN	2024-06-22	764734	5	DrillServ	Slinging	Yes	Yes	Slinging	263.5
Long-Range	Summer	FNDN	2024-06-22	764734	7	PaxLoc	Passenger	No	Yes	No Reason	373.2
Long-Range	Summer	GUIT	2024-06-23	765108	2	Core	Slinging	Yes	Yes	Slinging	290.0
Long-Range	Summer	GUIT	2024-06-23	765108	5	Move	Slinging	Yes	Yes	Slinging	231.2
Long-Range	Summer	GUIT	2024-06-23	765108	6	CrewChg	Passenger	No	Yes	No Reason	463.0
Long-Range	Summer	GUIT	2024-06-23	765108	7	PaxLoc	Passenger	No	Yes	No Reason	556.3
Long-Range	Summer	GUIT	2024-06-23	765108	8	PaxLoc	Passenger	No	Yes	No Reason	498.0
Long-Range	Summer	FNDN	2024-06-23	765224	1	CrewChg	Passenger	No	Yes	No Reason	330.3
Long-Range	Summer	FNDN	2024-06-23	765224	4	PaxLoc	Passenger	No	Yes	No Reason	324.4
Long-Range	Summer	FNDN	2024-06-23	765224	5	PaxLoc	Passenger	No	Yes	No Reason	285.9
Long-Range	Summer	FNDN	2024-06-24	765834	1	CrewChg	Passenger	No	Yes	No Reason	365.3
Long-Range	Summer	FNDN	2024-06-24	765834	2	PaxLoc	Passenger	No	Yes	No Reason	192.6
Long-Range	Summer	FNDN	2024-06-24	765834	3	PaxLoc	Passenger	No	Yes	No Reason	567.2
Long-Range	Summer	FNDN	2024-06-24	765834	4	Core	Slinging	Yes	Yes	Slinging	431.8
Long-Range	Summer	FNDN	2024-06-24	765834	5	PaxLoc	Passenger	No	Yes	No Reason	425.5
Long-Range	Summer	GUIT	2024-06-24	765944	1	PaxLoc	Passenger	No	Yes	No Reason	349.1
Long-Range	Summer	GUIT	2024-06-24	765944	2	PaxLoc	Passenger	No	Yes	No Reason	327.8
Long-Range	Summer	GUIT	2024-06-24	765944	3	CrewChg	Passenger	No	Yes	No Reason	484.5
Long-Range	Summer	GUIT	2024-06-24	765944	4	Fuel	Slinging	Yes	Yes	Slinging	378.5
Long-Range	Summer	GUIT	2024-06-25	766434	2	PaxLoc	Passenger	No	Yes	No Reason	420.3
Long-Range	Summer	GUIT	2024-06-25	766434	4	PaxLoc	Passenger	No	Yes	N/A	413.5
Long-Range	Summer	GUIT	2024-06-25	766434	5	PaxLoc	Passenger	No	Yes	N/A	109.8
Long-Range	Summer	GUIT	2024-06-25	766434	6	CrewChg	Passenger	No	Yes	No Reason	393.4

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	GUIT	2024-06-25	766434	7	PaxLoc	Passenger	No	Yes	No Reason	361.2
Long-Range	Summer	GUIT	2024-06-25	766434	8	PaxLoc	Passenger	No	Yes	No Reason	340.5
Long-Range	Summer	FNDN	2024-06-25	766492	1	CrewChg	Passenger	No	Yes	No Reason	455.1
Long-Range	Summer	FNDN	2024-06-25	766492	3	PaxLoc	Passenger	No	Yes	No Reason	437.6
Long-Range	Summer	FNDN	2024-06-25	766492	6	PaxLoc	Passenger	No	Yes	No Reason	434.6
Long-Range	Summer	FNDN	2024-06-25	766492	7	Core	Slinging	Yes	Yes	Slinging	244.8
Long-Range	Summer	FNDN	2024-06-25	766492	11	PaxLoc	Passenger	No	Yes	No Reason	331.7
Long-Range	Summer	GUIT	2024-06-26	766974	4	CrewChg	Passenger	No	Yes	No Reason	368.3
Long-Range	Summer	GUIT	2024-06-26	766974	6	Fuel	Slinging	Yes	Yes	Slinging	312.2
Long-Range	Summer	GUIT	2024-06-26	766974	7	Fuel	Slinging	Yes	Yes	Slinging	243.1
Long-Range	Summer	FNDN	2024-06-26	767121	1	CrewChg	Passenger	No	Yes	No Reason	255.0
Long-Range	Summer	FNDN	2024-06-26	767121	3	PaxLoc	Passenger	No	Yes	No Reason	454.2
Long-Range	Summer	FNDN	2024-06-26	767121	5	PaxLoc	Passenger	No	Yes	No Reason	481.9
Long-Range	Summer	FNDN	2024-06-26	767121	6	PaxLoc	Passenger	No	Yes	No Reason	379.8
Long-Range	Summer	GUIT	2024-06-27	767585	4	CrewChg	Passenger	No	Yes	No Reason	357.3
Long-Range	Summer	GUIT	2024-06-27	767585	6	DrillServ	Slinging	Yes	Yes	Slinging	314.2
Long-Range	Summer	GUIT	2024-06-27	767585	7	PaxLoc	Passenger	No	Yes	No Reason	357.0
Long-Range	Summer	FNDN	2024-06-27	767791	1	CrewChg	Passenger	No	Yes	No Reason	570.7
Long-Range	Summer	FNDN	2024-06-27	767791	2	Core	Slinging	Yes	Yes	Slinging	335.1
Long-Range	Summer	FNDN	2024-06-27	767791	3	PaxLoc	Passenger	No	Yes	No Reason	436.8
Long-Range	Summer	FNDN	2024-06-27	767791	4	PaxLoc	Passenger	No	Yes	No Reason	376.6
Long-Range	Summer	FNDN	2024-06-27	767791	6	PaxLoc	Passenger	No	Yes	No Reason	333.1
Long-Range	Summer	FNDN	2024-06-27	767791	7	PaxLoc	Passenger	No	Yes	No Reason	375.7
Long-Range	Summer	FNDN	2024-06-27	767791	8	PaxLoc	Passenger	No	Yes	No Reason	363.7
Long-Range	Summer	FNDN	2024-06-27	767791	9	PaxLoc	Passenger	No	Yes	No Reason	479.6
Long-Range	Summer	FNDN	2024-06-27	767791	11	PaxLoc	Passenger	No	Yes	N/A	363.3
Long-Range	Summer	GUIT	2024-06-28	768266	2	PaxLoc	Passenger	No	Yes	N/A	247.1
Long-Range	Summer	GUIT	2024-06-28	768266	3	PaxLoc	Passenger	No	Yes	No Reason	335.4
Long-Range	Summer	GUIT	2024-06-28	768266	4	Move	Slinging	Yes	Yes	Slinging	351.1
Long-Range	Summer	GUIT	2024-06-28	768266	7	PaxLoc	Passenger	No	Yes	No Reason	394.7
Long-Range	Summer	GUIT	2024-06-28	768266	8	PaxLoc	Passenger	No	Yes	No Reason	334.7
Long-Range	Summer	FNDN	2024-06-28	768404	5	PaxLoc	Passenger	No	Yes	No Reason	441.1
Long-Range	Summer	FNDN	2024-06-28	768404	8	PaxLoc	Passenger	No	Yes	No Reason	474.2
Long-Range	Summer	FNDN	2024-06-28	768404	11	DrillServ	Slinging	Yes	Yes	Slinging	276.1
Long-Range	Summer	GUIT	2024-06-29	768912	2	PaxLoc	Passenger	No	Yes	N/A	282.7
Long-Range	Summer	GUIT	2024-06-29	768912	4	DrillServ	Slinging	Yes	Yes	Slinging	402.4
Long-Range	Summer	GUIT	2024-06-29	768912	5	DrillServ	Slinging	Yes	Yes	Slinging	347.9
Long-Range	Summer	GUIT	2024-06-29	768912	8	DrillServ	Slinging	Yes	Yes	Slinging	175.6
Long-Range	Summer	GUIT	2024-06-29	768912	9	PaxLoc	Passenger	No	Yes	No Reason	372.9
Long-Range	Summer	FNDN	2024-06-29	768947	4	PaxLoc	Passenger	No	Yes	No Reason	351.0
Long-Range	Summer	FNDN	2024-06-29	768947	6	Move	Slinging	Yes	Yes	Slinging	166.8
Long-Range	Summer	GUIT	2024-06-30	769692	1	PaxLoc	Passenger	No	Yes	No Reason	250.9
Long-Range	Summer	GUIT	2024-06-30	769692	2	PaxLoc	Passenger	No	Yes	No Reason	258.5
Long-Range	Summer	GUIT	2024-07-01	770096	4	PaxLoc	Passenger	No	Yes	No Reason	355.0
Long-Range	Summer	GUIT	2024-07-01	770096	8	PaxLoc	Passenger	No	Yes	No Reason	502.2
Long-Range	Summer	FNDN	2024-07-01	770117	3	PaxLoc	Passenger	No	Yes	No Reason	631.3
Long-Range	Summer	FNDN	2024-07-01	770117	4	DrillServ	Slinging	Yes	No	Slinging	776.6
Long-Range	Summer	FNDN	2024-07-01	770117	8	PaxLoc	Passenger	No	Yes	No Reason	550.6
Long-Range	Summer	FNDN	2024-07-01	770117	9	PaxLoc	Passenger	No	No	N/A	755.4
Long-Range	Summer	GUIT	2024-07-03	771460	2	PaxLoc	Passenger	No	Yes	No Reason	352.4
Long-Range	Summer	GUIT	2024-07-03	771460	3	PaxLoc	Passenger	No	Yes	No Reason	307.5
Long-Range	Summer	FNDN	2024-07-04	772147	2	PaxLoc	Passenger	No	Yes	No Reason	379.5
Long-Range	Summer	FNDN	2024-07-04	772147	4	PaxLoc	Passenger	No	Yes	No Reason	592.5
Long-Range	Summer	GUIT	2024-07-05	772491	2	PaxLoc	Passenger	No	Yes	No Reason	306.3

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	GUIT	2024-07-05	772491	4	PaxLoc	Passenger	No	Yes	No Reason	347.3
Long-Range	Summer	GUIT	2024-07-05	772491	5	PaxLoc	Passenger	No	Yes	No Reason	169.7
Long-Range	Summer	GUIT	2024-07-05	772491	6	PaxLoc	Passenger	No	Yes	No Reason	367.5
Long-Range	Summer	FNDN	2024-07-06	773315	1	PaxLoc	Passenger	No	Yes	No Reason	427.9
Long-Range	Summer	FNDN	2024-07-06	773315	3	PaxLoc	Passenger	No	Yes	No Reason	365.0
Long-Range	Summer	GUIT	2024-07-08	774415	1	PaxLoc	Passenger	No	Yes	No Reason	173.5
Long-Range	Summer	GUIT	2024-07-08	774415	2	PaxLoc	Passenger	No	Yes	No Reason	271.1
Long-Range	Summer	GUIT	2024-07-08	774415	3	PaxLoc	Passenger	No	Yes	No Reason	478.0
Long-Range	Summer	GUIT	2024-07-09	775411	2	PaxLoc	Passenger	No	Yes	No Reason	545.7
Long-Range	Summer	GUIT	2024-07-09	775411	5	PaxLoc	Passenger	No	Yes	No Reason	359.4
Long-Range	Summer	FNDN	2024-07-09	775416	3	PaxLoc	Passenger	No	Yes	No Reason	406.3
Long-Range	Summer	FNDN	2024-07-09	775416	4	PaxLoc	Passenger	No	Yes	No Reason	531.9
Long-Range	Summer	FNDN	2024-07-09	775416	5	PaxLoc	Passenger	No	Yes	No Reason	201.3
Long-Range	Summer	FNDN	2024-07-11	776971	1	PaxLoc	Passenger	No	Yes	No Reason	204.7
Long-Range	Summer	FNDN	2024-07-11	776971	4	PaxLoc	Passenger	No	Yes	No Reason	479.5
Long-Range	Summer	FNDN	2024-07-12	777716	4	PaxLoc	Passenger	No	Yes	No Reason	322.7
Long-Range	Summer	FNDN	2024-07-12	777716	6	PaxLoc	Passenger	No	Yes	No Reason	380.7
Long-Range	Summer	GUIT	2024-07-13	778410	2	PaxLoc	Passenger	No	Yes	No Reason	259.9
Long-Range	Summer	GUIT	2024-07-13	778410	4	PaxLoc	Passenger	No	Yes	No Reason	458.0
Long-Range	Summer	GUIT	2024-07-14	778798	2	PaxLoc	Passenger	No	Yes	No Reason	569.2
Long-Range	Summer	GUIT	2024-07-14	778798	3	Pax	Passenger	No	Yes	No Reason	607.1
Long-Range	Summer	GUIT	2024-07-14	778798	6	PaxLoc	Passenger	No	Yes	No Reason	365.0
Long-Range	Summer	GUIT	2024-07-14	778798	8	PaxLoc	Passenger	No	Yes	No Reason	403.4
Long-Range	Summer	FGAV	2024-07-15	779839	2	PaxLoc	Passenger	No	Yes	N/A	200.1
Long-Range	Summer	FGAV	2024-07-15	779839	3	PaxLoc	Passenger	No	Yes	No Reason	439.0
Long-Range	Summer	GUIT	2024-07-15	779894	3	PaxLoc	Passenger	No	Yes	No Reason	381.2
Long-Range	Summer	GUIT	2024-07-15	779894	4	PaxLoc	Passenger	No	Yes	No Reason	555.5
Long-Range	Summer	FGAV	2024-07-16	780557	7	PaxLoc	Passenger	No	Yes	No Reason	200.4
Long-Range	Summer	GUIT	2024-07-16	780750	3	PaxLoc	Passenger	No	Yes	No Reason	290.8
Long-Range	Summer	GUIT	2024-07-16	780750	4	PaxLoc	Passenger	No	Yes	No Reason	293.7
Long-Range	Summer	FGAV	2024-07-17	781244	2	LocSlng	Slinging	Yes	Yes	Slinging	209.3
Long-Range	Summer	FGAV	2024-07-17	781244	3	PaxLoc	Passenger	Yes	Yes	Weather	210.1
Long-Range	Summer	FGAV	2024-07-17	781244	8	PaxLoc	Passenger	Yes	Yes	Weather	253.0
Long-Range	Summer	FGAV	2024-07-18	782174	3	PaxLoc	Passenger	No	Yes	No Reason	343.1
Long-Range	Summer	FGAV	2024-07-18	782174	4	PaxLoc	Passenger	No	Yes	No Reason	272.6
Long-Range	Summer	FGAV	2024-07-18	782174	10	PaxLoc	Passenger	No	Yes	No Reason	333.6
Long-Range	Summer	FGAV	2024-07-19	782745	2	PaxLoc	Passenger	No	Yes	No Reason	319.2
Long-Range	Summer	FGAV	2024-07-19	782745	3	PaxLoc	Passenger	No	Yes	No Reason	454.5
Long-Range	Summer	FGAV	2024-07-19	782745	5	PaxLoc	Passenger	No	Yes	No Reason	366.3
Long-Range	Summer	FGAV	2024-07-20	783635	2	DrillServ	Slinging	Yes	Yes	Slinging	269.7
Long-Range	Summer	FGAV	2024-07-20	783635	3	PaxLoc	Passenger	No	Yes	No Reason	379.5
Long-Range	Summer	FGAV	2024-07-20	783635	6	PaxLoc	Passenger	No	Yes	No Reason	444.2
Long-Range	Summer	FGAV	2024-07-20	783635	8	PaxLoc	Passenger	No	Yes	No Reason	384.0
Long-Range	Summer	FGAV	2024-07-21	784351	2	PaxLoc	Passenger	No	Yes	No Reason	430.6
Long-Range	Summer	FGAV	2024-07-21	784351	4	PaxLoc	Passenger	No	Yes	No Reason	396.2
Long-Range	Summer	FGAV	2024-07-21	784351	7	Floor	Slinging	Yes	Yes	Slinging	281.9
Long-Range	Summer	FGAV	2024-07-21	784351	8	Floor	Slinging	Yes	Yes	Slinging	270.9
Long-Range	Summer	FGAV	2024-07-22	785150	2	PaxLoc	Passenger	No	Yes	No Reason	465.2
Long-Range	Summer	FGAV	2024-07-22	785150	5	Move	Slinging	Yes	Yes	Slinging	277.0
Long-Range	Summer	FGAV	2024-07-22	785150	6	Move	Slinging	Yes	Yes	Slinging	225.8
Long-Range	Summer	FGAV	2024-07-22	785150	7	PaxLoc	Passenger	No	Yes	No Reason	436.1
Long-Range	Summer	FGAV	2024-07-23	785614	1	PaxLoc	Passenger	No	Yes	No Reason	395.6
Long-Range	Summer	FGAV	2024-07-23	786091	1	PaxLoc	Passenger	No	Yes	No Reason	292.5
Long-Range	Summer	FGAV	2024-07-23	786091	3	Move	Slinging	Yes	Yes	Slinging	173.5

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	FGAV	2024-07-23	786091	4	Move	Slinging	Yes	Yes	Slinging	211.7
Long-Range	Summer	FGAV	2024-07-24	786857	1	PaxLoc	Passenger	No	Yes	No Reason	281.3
Long-Range	Summer	FGAV	2024-07-24	786857	2	PaxLoc	Passenger	No	Yes	No Reason	237.5
Long-Range	Summer	FGAV	2024-07-24	786857	4	Move	Slinging	Yes	Yes	Slinging	269.4
Long-Range	Summer	FGAV	2024-07-24	786857	5	Move	Slinging	Yes	Yes	Slinging	299.6
Long-Range	Summer	FGAV	2024-07-24	786857	6	PaxLoc	Passenger	No	Yes	No Reason	303.8
Long-Range	Summer	FGAV	2024-07-24	786857	8	PaxLoc	Passenger	No	Yes	No Reason	334.0
Long-Range	Summer	FGAV	2024-07-25	787627	1	PaxLoc	Passenger	No	Yes	No Reason	491.0
Long-Range	Summer	FGAV	2024-07-25	787627	2	Move	Slinging	Yes	Yes	Slinging	333.8
Long-Range	Summer	FGAV	2024-07-25	787627	3	PaxLoc	Passenger	No	Yes	No Reason	215.0
Long-Range	Summer	FGAV	2024-07-25	787627	4	PaxLoc	Passenger	No	Yes	No Reason	378.1
Long-Range	Summer	FGAV	2024-07-25	787627	7	PaxLoc	Passenger	No	Yes	No Reason	422.9
Long-Range	Summer	FGAV	2024-07-25	787627	10	PaxLoc	Passenger	No	Yes	No Reason	303.6
Long-Range	Summer	FGAV	2024-07-25	787627	11	Move	Slinging	Yes	Yes	Slinging	322.2
Long-Range	Summer	FGAV	2024-07-25	787627	12	PaxLoc	Passenger	No	Yes	No Reason	284.9
Long-Range	Summer	FGAV	2024-07-25	787627	13	PaxLoc	Passenger	No	Yes	No Reason	462.7
Long-Range	Summer	FGAV	2024-07-25	787627	14	DrillServ	Slinging	Yes	Yes	Slinging	372.3
Long-Range	Summer	FGAV	2024-07-26	788351	1	CrewChg	Passenger	No	Yes	No Reason	445.6
Long-Range	Summer	FGAV	2024-07-26	788351	3	Ferry	Ferry	No	Yes	No Reason	230.4
Long-Range	Summer	FGAV	2024-07-26	788351	7	Ferry	Ferry	No	Yes	No Reason	312.7
Long-Range	Summer	FGAV	2024-07-26	788351	8	Move	Slinging	Yes	Yes	Slinging	308.4
Long-Range	Summer	FGAV	2024-07-26	788351	9	Move	Slinging	Yes	Yes	Slinging	332.4
Long-Range	Summer	FGAV	2024-07-26	788351	10	DrillServ	Slinging	Yes	Yes	Slinging	287.3
Long-Range	Summer	FGAV	2024-07-26	788351	12	PaxLoc	Passenger	No	Yes	No Reason	333.7
Long-Range	Summer	FGAV	2024-07-26	788351	13	Move	Slinging	Yes	Yes	Slinging	215.2
Long-Range	Summer	FGAV	2024-07-26	788351	14	Move	Slinging	Yes	Yes	Slinging	323.6
Long-Range	Summer	FGAV	2024-07-26	788351	15	PaxLoc	Passenger	No	Yes	No Reason	349.0
Long-Range	Summer	FGAV	2024-07-26	788351	16	CrewChg	Passenger	No	Yes	No Reason	306.1
Long-Range	Summer	FGAV	2024-07-27	788985	1	CrewChg	Passenger	No	Yes	No Reason	372.2
Long-Range	Summer	FGAV	2024-07-27	788985	2	PaxLoc	Passenger	No	Yes	No Reason	498.3
Long-Range	Summer	FGAV	2024-07-27	788985	3	PaxLoc	Passenger	No	Yes	No Reason	298.1
Long-Range	Summer	FGAV	2024-07-27	788985	5	Floor	Slinging	Yes	Yes	Slinging	341.7
Long-Range	Summer	FGAV	2024-07-27	788985	7	PaxLoc	Passenger	No	Yes	No Reason	350.7
Long-Range	Summer	FGAV	2024-07-27	788985	10	GenSlng	Slinging	Yes	Yes	Slinging	496.2
Long-Range	Summer	FGAV	2024-07-27	788985	14	CrewChg	Passenger	No	No	N/A	697.8
Long-Range	Summer	FGAV	2024-07-28	789652	1	CrewChg	Passenger	No	Yes	No Reason	507.2
Long-Range	Summer	FGAV	2024-07-28	789652	2	PaxLoc	Passenger	No	Yes	No Reason	285.0
Long-Range	Summer	FGAV	2024-07-28	789652	3	Core	Slinging	Yes	Yes	Slinging	422.0
Long-Range	Summer	FGAV	2024-07-28	789652	5	PaxLoc	Passenger	No	Yes	No Reason	522.2
Long-Range	Summer	FGAV	2024-07-28	789652	6	PaxLoc	Passenger	No	Yes	No Reason	506.1
Long-Range	Summer	FGAV	2024-07-28	789652	7	CrewChg	Passenger	No	Yes	No Reason	536.1
Long-Range	Summer	FGAV	2024-07-29	790492	1	CrewChg	Passenger	No	Yes	No Reason	494.7
Long-Range	Summer	FGAV	2024-07-29	790492	2	PaxLoc	Passenger	No	Yes	No Reason	184.0
Long-Range	Summer	FGAV	2024-07-29	790492	3	PaxLoc	Passenger	No	Yes	No Reason	446.9
Long-Range	Summer	FGAV	2024-07-29	790492	6	PaxLoc	Passenger	No	Yes	No Reason	474.5
Long-Range	Summer	FGAV	2024-07-29	790492	9	Ferry	Ferry	No	Yes	No Reason	623.4
Long-Range	Summer	FGAV	2024-07-29	790492	10	PaxLoc	Passenger	No	No	N/A	768.7
Long-Range	Summer	FGAV	2024-07-29	790492	12	Core	Slinging	Yes	Yes	Slinging	445.7
Long-Range	Summer	FGAV	2024-07-29	790492	13	CrewChg	Passenger	No	Yes	No Reason	534.5
Long-Range	Summer	FGAV	2024-07-30	791217	1	CrewChg	Passenger	No	Yes	No Reason	287.2
Long-Range	Summer	FGAV	2024-07-30	791217	3	Core	Slinging	Yes	Yes	Slinging	211.6
Long-Range	Summer	FGAV	2024-07-30	791217	5	PaxLoc	Passenger	No	Yes	No Reason	210.0
Long-Range	Summer	FGAV	2024-07-30	791217	6	PaxLoc	Passenger	No	Yes	No Reason	224.2
Long-Range	Summer	FGAV	2024-07-30	791217	8	PaxLoc	Passenger	No	Yes	No Reason	156.9

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	FGAV	2024-07-30	791217	11	PaxLoc	Passenger	No	Yes	No Reason	313.3
Long-Range	Summer	FGAV	2024-07-30	791217	12	CrewChg	Passenger	No	No	N/A	742.0
Long-Range	Summer	FGAV	2024-07-31	792043	1	CrewChg	Passenger	No	Yes	No Reason	470.9
Long-Range	Summer	FGAV	2024-07-31	792043	6	PaxLoc	Passenger	No	Yes	No Reason	556.7
Long-Range	Summer	FGAV	2024-07-31	792043	8	PaxLoc	Passenger	No	Yes	No Reason	366.5
Long-Range	Summer	FGAV	2024-07-31	792043	10	Core	Slinging	Yes	Yes	Slinging	551.7
Long-Range	Summer	FGAV	2024-07-31	792043	11	CrewChg	Passenger	No	Yes	No Reason	405.8
Long-Range	Summer	FGAV	2024-08-01	792787	1	Core	Slinging	Yes	Yes	Slinging	450.6
Long-Range	Summer	FGAV	2024-08-01	792787	4	DrillServ	Slinging	Yes	Yes	Slinging	350.4
Long-Range	Summer	FGAV	2024-08-01	792787	5	PaxLoc	Passenger	No	Yes	No Reason	460.2
Long-Range	Summer	FGAV	2024-08-01	792787	6	DrillServ	Slinging	Yes	Yes	Slinging	351.4
Long-Range	Summer	FGAV	2024-08-01	792787	7	PaxLoc	Passenger	No	Yes	No Reason	450.2
Long-Range	Summer	FGAV	2024-08-01	792787	11	CrewChg	Passenger	No	Yes	No Reason	490.4
Long-Range	Summer	FGAV	2024-08-02	793536	1	Core	Slinging	Yes	Yes	Slinging	635.7
Long-Range	Summer	FGAV	2024-08-02	793536	4	DrillServ	Slinging	Yes	Yes	Slinging	431.6
Long-Range	Summer	FGAV	2024-08-02	793536	6	PaxLoc	Passenger	No	Yes	No Reason	590.5
Long-Range	Summer	FGAV	2024-08-02	793536	8	PaxLoc	Passenger	No	Yes	No Reason	489.3
Long-Range	Summer	FGAV	2024-08-02	793536	10	CrewChg	Passenger	No	Yes	No Reason	561.5
Long-Range	Summer	FGAV	2024-08-03	794121	1	CrewChg	Passenger	No	Yes	No Reason	534.7
Long-Range	Summer	FGAV	2024-08-03	794121	3	PaxLoc	Passenger	No	Yes	No Reason	559.5
Long-Range	Summer	FGAV	2024-08-03	794121	6	DrillServ	Slinging	Yes	Yes	Slinging	512.9
Long-Range	Summer	FGAV	2024-08-03	794121	7	DrillServ	Slinging	Yes	Yes	Slinging	502.2
Long-Range	Summer	FGAV	2024-08-03	794121	8	PaxLoc	Passenger	No	Yes	No Reason	514.3
Long-Range	Summer	FGAV	2024-08-03	794121	10	CrewChg	Passenger	No	Yes	No Reason	627.9
Long-Range	Summer	FGAV	2024-08-04	794787	1	CrewChg	Passenger	No	Yes	No Reason	563.2
Long-Range	Summer	FGAV	2024-08-04	794787	2	Core	Slinging	Yes	Yes	Slinging	474.6
Long-Range	Summer	FGAV	2024-08-04	794787	4	PaxLoc	Passenger	No	Yes	No Reason	532.4
Long-Range	Summer	FGAV	2024-08-04	794787	8	PaxLoc	Passenger	No	Yes	No Reason	432.0
Long-Range	Summer	FGAV	2024-08-04	794787	9	PaxLoc	Passenger	No	Yes	No Reason	535.5
Long-Range	Summer	FGAV	2024-08-04	794787	10	CrewChg	Passenger	No	Yes	No Reason	479.3
Long-Range	Summer	FGAV	2024-08-05	795616	1	CrewChg	Passenger	No	Yes	No Reason	236.9
Long-Range	Summer	FGAV	2024-08-05	795616	2	Core	Slinging	Yes	Yes	Slinging	286.0
Long-Range	Summer	FGAV	2024-08-05	795616	6	CrewChg	Passenger	No	Yes	No Reason	568.4
Long-Range	Summer	FGAV	2024-08-06	796128	1	CrewChg	Passenger	Yes	Yes	Weather	175.2
Long-Range	Summer	FGAV	2024-08-06	796128	2	Core	Slinging	Yes	Yes	Slinging	155.3
Long-Range	Summer	FGAV	2024-08-06	796128	4	Move	Slinging	Yes	Yes	Slinging	160.8
Long-Range	Summer	FGAV	2024-08-06	796375	1	Move	Slinging	Yes	Yes	Slinging	297.3
Long-Range	Summer	FGAV	2024-08-06	796375	2	Move	Slinging	Yes	Yes	Slinging	232.8
Long-Range	Summer	FGAV	2024-08-06	796375	3	Move	Slinging	Yes	Yes	Slinging	262.2
Long-Range	Summer	FSVG	2024-08-06	796464	2	PaxLoc	Passenger	No	Yes	No Reason	128.1
Long-Range	Summer	FSVG	2024-08-06	796464	3	PaxLoc	Passenger	No	Yes	No Reason	146.7
Long-Range	Summer	FSVG	2024-08-06	796464	4	PaxLoc	Passenger	No	Yes	No Reason	121.9
Long-Range	Summer	FSVG	2024-08-07	797050	2	PaxLoc	Passenger	No	Yes	No Reason	100.6
Long-Range	Summer	FSVG	2024-08-07	797050	3	PaxLoc	Passenger	No	Yes	No Reason	122.5
Long-Range	Summer	FGAV	2024-08-07	797127	1	Move	Slinging	Yes	Yes	Slinging	257.9
Long-Range	Summer	FGAV	2024-08-07	797127	2	Move	Slinging	Yes	Yes	Slinging	234.8
Long-Range	Summer	FGAV	2024-08-07	797127	3	Move	Slinging	Yes	Yes	Slinging	224.9
Long-Range	Summer	FGAV	2024-08-07	797127	4	Move	Slinging	Yes	Yes	Slinging	215.1
Long-Range	Summer	FGAV	2024-08-07	797127	6	Move	Slinging	Yes	Yes	Slinging	227.5
Long-Range	Summer	FGAV	2024-08-07	797127	7	PaxLoc	Passenger	No	Yes	No Reason	413.3
Long-Range	Summer	FSVG	2024-08-08	797878	2	PaxLoc	Passenger	No	Yes	No Reason	118.9
Long-Range	Summer	FSVG	2024-08-08	797878	4	PaxLoc	Passenger	No	Yes	No Reason	243.7
Long-Range	Summer	FGAV	2024-08-08	797935	2	PaxLoc	Passenger	Yes	Yes	Wildlife Survey	156.2
Long-Range	Summer	FGAV	2024-08-08	797935	4	PaxLoc	Passenger	Yes	Yes	Wildlife Survey	137.8

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	FGAV	2024-08-08	797935	5	PaxLoc	Passenger	Yes	Yes	Wildlife Survey	128.7
Long-Range	Summer	FSVG	2024-08-09	798656	2	PaxLoc	Passenger	No	Yes	No Reason	107.4
Long-Range	Summer	FSVG	2024-08-09	798656	4	PaxLoc	Passenger	No	Yes	No Reason	165.7
Long-Range	Summer	FGAV	2024-08-09	798691	1	PaxLoc	Passenger	Yes	Yes	Smoke/Wildlife Survey	110.5
Long-Range	Summer	FGAV	2024-08-09	798691	2	PaxLoc	Passenger	Yes	Yes	Smoke/Wildlife Survey	92.7
Long-Range	Summer	FGAV	2024-08-09	798691	4	PaxLoc	Passenger	Yes	Yes	Smoke/Wildlife Survey	117.3
Long-Range	Summer	FGAV	2024-08-09	798691	5	PaxLoc	Passenger	Yes	Yes	Smoke	516.5
Long-Range	Summer	FSVG	2024-08-10	799354	2	PaxLoc	Passenger	No	Yes	No Reason	102.7
Long-Range	Summer	FSVG	2024-08-10	799354	3	PaxLoc	Passenger	No	Yes	No Reason	67.3
Long-Range	Summer	FSVG	2024-08-10	799354	4	PaxLoc	Passenger	No	Yes	No Reason	239.8
Long-Range	Summer	FGAV	2024-08-10	799381	1	Move	Slinging	Yes	Yes	Slinging	255.9
Long-Range	Summer	FGAV	2024-08-10	799381	2	Move	Slinging	Yes	Yes	Slinging	250.6
Long-Range	Summer	FGAV	2024-08-10	799381	4	Move	Slinging	Yes	Yes	Slinging	213.5
Long-Range	Summer	FGAV	2024-08-10	799381	5	Move	Slinging	Yes	Yes	Slinging	201.2
Long-Range	Summer	FGAV	2024-08-10	799381	6		Slinging	Yes	Yes	Slinging	202.5
Long-Range	Summer	FGAV	2024-08-10	799381	7		Passenger	Yes	Yes	Smoke	313.3
Long-Range	Summer	FSVG	2024-08-11	799998	2	PaxLoc	Passenger	No	Yes	No Reason	166.5
Long-Range	Summer	FSVG	2024-08-11	799998	3	PaxLoc	Passenger	No	Yes	No Reason	224.0
Long-Range	Summer	FGAV	2024-08-11	800002	3	LocSlng	Slinging	Yes	Yes	Slinging	286.1
Long-Range	Summer	FGAV	2024-08-11	800002	4	LocSlng	Slinging	Yes	Yes	Slinging	257.5
Long-Range	Summer	FGAV	2024-08-11	800002	5	PaxLoc	Passenger	Yes	Yes	Smoke	232.4
Long-Range	Summer	FGAV	2024-08-11	800002	6	PaxLoc	Passenger	Yes	Yes	Wildlife Survey	91.8
Long-Range	Summer	FGAV	2024-08-13	8015882	1	PaxLoc	Passenger	Yes	Yes	Weather	434.6
Long-Range	Summer	FGAV	2024-08-13	8015882	2	PaxLoc	Passenger	Yes	Yes	Weather	267.5
Long-Range	Summer	FGAV	2024-08-14	802315	2	PaxLoc	Passenger	No	Yes	No Reason	330.5
Long-Range	Summer	FGAV	2024-08-14	802315	3	PaxLoc	Passenger	Yes	Yes	Weather	312.6
Long-Range	Summer	FGAV	2024-08-17	805102	1	Reposition	Slinging	Yes	Yes	Slinging	388.7
Long-Range	Summer	FGAV	2024-08-17	805102	11	Reposition	Slinging	Yes	Yes	Slinging	568.7
Long-Range	Summer	FGAV	2024-08-19	807355	1	PaxLoc	Passenger	No	No	No Reason	726.3
Long-Range	Summer	FGAV	2024-08-19	807355	2	PaxLoc	Passenger	No	Yes	No Reason	602.8
Long-Range	Summer	FGAV	2024-08-20	806976	1	SAR	SAR	Yes	Yes	Emergency	301.1
Long-Range	Summer	FGAV	2024-08-20	806976	2	SAR	SAR	Yes	Yes	Emergency	142.7
Long-Range	Summer	FGAV	2024-08-20	806976	3	SAR	SAR	Yes	Yes	Emergency	168.4
Long-Range	Summer	FGAV	2024-08-20	806976	4	SAR	SAR	Yes	Yes	Emergency	170.4
Long-Range	Summer	FGAV	2024-08-20	806976	5	Ferry	Ferry	Yes	Yes	Emergency	334.7
Long-Range	Summer	FGAV	2024-08-21	808072	1	SAR	SAR	Yes	Yes	Emergency	336.4
Long-Range	Summer	FGAV	2024-08-21	808072	2	SAR	SAR	Yes	Yes	Emergency	168.5
Long-Range	Summer	FGAV	2024-08-21	808072	3	SAR	SAR	Yes	Yes	Emergency	184.8
Long-Range	Summer	FGAV	2024-08-21	808072	4	Ferry	Ferry	No	Yes	No Reason	426.7
Long-Range	Summer	FGAV	2024-08-21	808072	5	VIP	Passenger	Yes	Yes	Environmental Survey	319.8
Long-Range	Summer	FGAV	2024-08-21	808072	6	SAR	SAR	Yes	Yes	Emergency	230.9
Long-Range	Summer	FGAV	2024-08-22	808811	1	SAR	SAR	Yes	Yes	Emergency	195.8
Long-Range	Summer	FGAV	2024-08-22	808811	2	Reposition	Slinging	Yes	Yes	Slinging	288.7
Long-Range	Summer	FGAV	2024-08-22	808811	3	SAR	SAR	Yes	Yes	Emergency	211.6
Long-Range	Summer	FGAV	2024-08-22	808811	4	SAR	SAR	Yes	Yes	Emergency	209.5
Long-Range	Summer	FGAV	2024-08-22	808811	5	SAR	SAR	Yes	Yes	Emergency	305.7
Long-Range	Summer	FGAV	2024-08-23	809477	1	Reposition	Slinging	Yes	Yes	Slinging	396.8
Long-Range	Summer	FGAV	2024-08-23	809477	2	SAR	SAR	Yes	Yes	Emergency	184.2
Long-Range	Summer	FGAV	2024-08-23	809477	3	Reposition	Slinging	Yes	Yes	Slinging	281.8
Long-Range	Summer	FGAV	2024-08-23	809477	4	SAR	SAR	Yes	Yes	Emergency	211.9
Long-Range	Summer	FGAV	2024-08-23	809477	5	SAR	SAR	Yes	Yes	Emergency	244.9
Long-Range	Summer	FGAV	2024-08-25	810311	1	SAR	SAR	Yes	Yes	Emergency	401.3
Long-Range	Summer	FGAV	2024-08-25	810311	2	SAR	SAR	Yes	Yes	Emergency	192.5
Long-Range	Summer	FGAV	2024-08-25	810311	3	SAR	SAR	Yes	Yes	Emergency	188.5

Table E-1: 2024 Helicoper Flights

Range Length	Season	Aircraft	Date	Flight Report Number	Flight Leg	Flight Code	Flight Type	Low Flight Permissible?	Mean Height Lower Than Restriction?	Comment Reason	Mean Height Above Ground (m)
Long-Range	Summer	FGAV	2024-08-25	810311	4	SAR	SAR	Yes	Yes	Emergency	204.1
Long-Range	Summer	FGAV	2024-08-26	811533	2	SAR	SAR	Yes	Yes	No Reason	594.9
Long-Range	Summer	FGAV	2024-08-26	811533	3	SAR	SAR	Yes	Yes	Emergency	199.8
Long-Range	Summer	FGAV	2024-08-26	811533	4	SAR	SAR	Yes	Yes	Emergency	312.9
Long-Range	Summer	FGAV	2024-08-27	812060	3	PaxLoc	Passenger	No	Yes	No Reason	352.7
Long-Range	Summer	FGAV	2024-08-27	812060	5	PaxLoc	Passenger	No	Yes	No Reason	430.7
Long-Range	Summer	FGAV	2024-08-29	812971	1	Reposition	Slinging	Yes	Yes	Slinging	163.0
Long-Range	Summer	FGAV	2024-08-29	812971	2	Reposition	Slinging	Yes	Yes	Slinging	107.4
Long-Range	Summer	FGAV	2024-08-30	813885	1	PaxLoc	Passenger	Yes	Yes	Weather	171.2
Long-Range	Summer	FGAV	2024-08-30	813885	5	Ferry	Ferry	Yes	Yes	Weather	215.4
Long-Range	Summer	FGAV	2024-09-01	814927	4	DrillServ	Slinging	Yes	Yes	Slinging	279.9
Long-Range	Summer	FGAV	2024-09-01	814927	5	PaxLoc	Passenger	No	Yes	No Reason	187.0
Long-Range	Summer	FNDN	2024-09-01	815307	1	DrillServ	Slinging	Yes	Yes	Slinging	208.6
Long-Range	Summer	FNDN	2024-09-03	816143	1	PaxLoc	Passenger	Yes	Yes	Weather	163.6
Long-Range	Summer	FNDN	2024-09-03	816143	2	PaxLoc	Passenger	Yes	Yes	Weather	244.0
Long-Range	Summer	FNDN	2024-09-03	816143	5	Reposition	Slinging	Yes	Yes	Slinging	235.7
Long-Range	Summer	FGAV	2024-09-04	816621	2	Ferry	Ferry	No	Yes	No Reason	353.5
Long-Range	Summer	FGAV	2024-09-04	816632	2	Ferry	Ferry	No	Yes	No Reason	387.6
Long-Range	Summer	FGAV	2024-09-06	817696	4	PaxLoc	Passenger	No	Yes	No Reason	222.7
Long-Range	Summer	FGAV	2024-09-06	817696	5	PaxLoc	Passenger	No	Yes	No Reason	235.8
Long-Range	Summer	FGAV	2024-09-09	819379	4	PaxLoc	Passenger	Yes	Yes	Weather	174.1
Long-Range	Summer	FGAV	2024-09-09	819379	5	PaxLoc	Passenger	Yes	Yes	Weather	193.6
Long-Range	Summer	FNDN	2024-09-10	820302	1	Ferry	Ferry	Yes	Yes	Weather	169.2
Long-Range	Summer	FNDN	2024-09-12	821719	2	PaxLoc	Passenger	No	Yes	No Reason	401.0
Long-Range	Summer	FNDN	2024-09-12	821719	3	PaxLoc	Passenger	No	Yes	No Reason	357.8
Long-Range	Summer	FGAV	2024-09-13	821965	4	LocSlng	Slinging	Yes	Yes	Slinging	173.6
Long-Range	Summer	FNDN	2024-09-13	822304	1	PaxLoc	Passenger	Yes	Yes	Smoke	231.9
Long-Range	Summer	FNDN	2024-09-13	822304	2	LocSlng	Slinging	Yes	Yes	Slinging	236.2
Long-Range	Summer	FNDN	2024-09-16	823907	3	Move	Slinging	Yes	Yes	Slinging	186.1
Long-Range	Summer	FNDN	2024-09-16	823907	5	PaxLoc	Passenger	No	Yes	No Reason	266.0
Long-Range	Summer	FNDN	2024-09-18	825114	1	PaxLoc	Passenger	Yes	Yes	Weather	181.3
Long-Range	Summer	FNDN	2024-09-18	825114	2	PaxLoc	Passenger	Yes	Yes	Weather	138.4
Long-Range	Summer	FNDN	2024-09-18	825114	3	PaxLoc	Passenger	Yes	Yes	Weather	162.4
Long-Range	Summer	FNDN	2024-09-19	825761	1	PaxLoc	Passenger	Yes	Yes	Weather	138.6
Long-Range	Summer	FNDN	2024-09-19	825761	3	PaxLoc	Passenger	No	Yes	No Reason	467.3
Long-Range	Summer	FNDN	2024-09-19	825761	4	PaxLoc	Passenger	No	Yes	No Reason	499.8
Long-Range	Summer	FNDN	2024-09-19	825761	8	PaxLoc	Passenger	No	Yes	No Reason	414.7
Long-Range	Summer	FNDN	2024-09-19	825761	9	PaxLoc	Passenger	No	Yes	No Reason	356.6
Long-Range	Summer	FNDN	2024-09-19	825761	10	PaxLoc	Passenger	No	Yes	No Reason	378.9
Long-Range	Fall	FGAV	2024-09-24	828372	1	PaxLoc	Passenger	Yes	Yes	Weather	201.6
Long-Range	Fall	FGAV	2024-09-24	828372	3	PaxLoc	Passenger	Yes	Yes	Wildlife Survey	160.6
Long-Range	Fall	FGAV	2024-09-25	829104	2	PaxLoc	Passenger	Yes	Yes	Weather	135.2
Long-Range	Fall	FGAV	2024-09-26	829638	1	PaxLoc	Passenger	Yes	Yes	Weather	187.9
Long-Range	Fall	FGAV	2024-09-26	829638	3	PaxLoc	Passenger	Yes	Yes	Weather	218.1
Long-Range	Fall	FGAV	2024-09-26	829638	7	PaxLoc	Passenger	Yes	Yes	Weather	161.0
Long-Range	Fall	FGAV	2024-09-26	829638	8	DrillClean	DrillClean	Yes	Yes	Weather	122.9
Long-Range	Fall	FGAV	2024-09-26	829638	9	PaxLoc	Passenger	Yes	Yes	Weather	120.5
Long-Range	Fall	FGAV	2024-09-26	829638	11	PaxLoc	Passenger	Yes	Yes	Weather	156.4

APPENDIX F

Hunter Harvest Study



MEADOWBANK COMPLEX MINE

2024 HUNTER HARVEST STUDY AND CREEL SURVEY SUMMARY REPORT

07 MARCH 2025

Table of Contents

EXECUTIVE SUMMARY **5**

SECTION 1 • OVERVIEW **6**

SECTION 2 • OBJECTIVES **7**

SECTION 3 • METHODOLOGY **8**

SECTION 4 • HISTORICAL RESULTS **9**

SECTION 5 • 2024 HUNTER HARVEST STUDY RESULTS **10**

5.1 Number of Hunters 10
5.2 Distribution of Hunting 10
5.3 Magnitude of Hunting 14
5.4 Seasonal Distribution and Timing of Hunting 17
5.5 Other Wildlife Species 25

SECTION 6 • 2024 CREEL SURVEY RESULTS **30**

6.1 Number of Fishermen 30
6.2 Composition of Catch 30
6.3 Distribution of Fishing 31
6.4 Magnitude of Fishing 33
6.5 Seasonal Timing of Fishing 33

SECTION 7 • ACCURACY OF IMPACT PREDICTIONS **36**

SECTION 8 • MANAGEMENT RECOMMENDATIONS **37**

SECTION 9 • LITERATURE CITED **38**

List of Tables

Table 5.1:	Caribou Harvest Distribution along the AWAR and within the Meadowbank LSA and RSA (1996 to 2001 [NWMB], and 2007 to 2015 and 2019 to 2024 [Baker Lake HHS])	12
Table 5.2	Caribou Harvest Distribution along the WTHR and within the Whale Tail LSA and RSA (1996 to 2001 [NWMB], and 2007 to 2015 and 2019 to 2024 [Baker Lake HHS])	14
Table 5.3:	Hunter Caribou Harvest Statistics from the NWMB (2004) Study and Baker Lake HHS (2007 to 2015; 2019 to 2024), which includes the Meadowbank and Whale Tail Areas	15
Table 5.4:	Total Number of Terrestrial Mammal Harvests Reported from 2019 to 2024 in the Baker Lake Hunter Harvest Study	25
Table 5.5:	Total Number of Bird Harvests Reported from 2019 to 2024 in the Baker Lake Hunter Harvest Study	28
Table 6.1:	Number of Fisherman in the Baker Lake Area who have Recorded Fishing Success by Year and Month	30
Table 6.2:	Total Number of Fish Caught between 2007 and 2015, and 2019 to 2024	31
Table 7.1:	Accuracy of Impact Predictions – 2024 Baker Lake HHS	36

List of Figures

Figure 5.1:	Total Number of Caribou Harvested in 2024	11
Figure 5.2:	Percent of Caribou Harvest within the Meadowbank RSA from 2007 to 2015 (Years 1 to 9), and 2019 to 2024 (Years 10 to 14) Compared to Baseline and Threshold Levels	12
Figure 5.3:	Seasonal Trends in Caribou Harvest from the Baker Lake HHS (2007 to 2015; 2019 to 2024) and the NWMB Study (1996 to 2001)	18
Figure 5.4:	Terrestrial Animals Harvested per Month and by Participant in 2024	19
Figure 5.5:	Number of Caribou harvested in each Caribou Season and Proximity to Access Roads in 2024	20
Figure 5.6a:	Total Number of Caribou Harvested in Spring 2024 (Apr 01 to May 25)	21
Figure 5.6b:	Total Number of Caribou Harvested in Summer 2024 (May 26 to Sep 21)	22
Figure 5.6c:	Total Number of Caribou Harvested in Fall 2024 (Sep 22 to Dec 15)	23
Figure 5.6d:	Total Number of Caribou Harvested in Winter 2024 (Dec 16 to Mar 31)	24
Figure 5.7:	Total Number of Muskox and Red Fox Harvested in 2024	26
Figure 5.8:	Total Number of Wolf and Wolverine Harvested in 2024	27
Figure 5.9	Total Number of Birds Harvested in 2024	29
Figure 6.1:	Total Number of Fish Caught in 2024	32
Figure 6.2:	Average Number of Fish Caught per Participant in 2024 and the Minimum and Maximum Range from 2007 to 2015 and 2019 to 2023	34
Figure 6.3:	Seasonal Trends in Fishing (Number of Fish Caught) in the Baker Lake Area from 2007 to 2015 and 2019 to 2024	353

List of Appendices

Appendix A 2024 Hunter Harvest Calendar

EXECUTIVE SUMMARY

A Baker Lake Hunter Harvest Study (HHS) conducted from 2007 to 2015 was relaunched in 2019 and continued into 2024. The 2024 study included 77 participants of which 64 reported harvesting Caribou (*Rangifer tarandus*). Given an estimated 300 to 350 active hunters in the Hamlet of Baker Lake, the HHS represents from 18 to 21% of hunters in the community. With a total reported Caribou harvest of 820 individuals in 2024, the total Caribou harvest in Baker Lake in 2024 was estimated to range from 3,905 to 4,556 Caribou, which is higher than the annual estimated harvest between 1996 and 2001 (2,230 and 3,116; NWMB 2004) but comparable to other years of the HHS.

Compared to the average across other years, Caribou in 2024 were harvested at a higher percentage within 5 km of the All-Weather Access Road (i.e., 48%) and at a higher percentage (82%) within the Regional Study Area (RSA); however, harvest levels in 2024 were within threshold levels established during the impact assessment (i.e., Caribou harvest levels within the RSA).

No Muskox (*Ovibos moschatus*) and 15 Wolverine (*Gulo gulo*) were harvested in 2024, which is lower than in 2023 (i.e., 7 and 18, respectively). A total of 143 Wolves (*Canis lupus*) were reported as being harvested in 2024, which is considerably higher than the 47 reported in 2023 and 92 reported in 2022. Two Grizzly Bear (*Ursus arctos*) were also harvested, although one was harvested outside the HHS boundaries. Several bird species were harvested in 2024 with ptarmigan (*Lagopus* sp.) and Canada Goose (*Branta canadensis*) being the most common species. For the third year in a row, marine mammals (i.e., Ringed Seal, *Pusa hispida*) were reported as being harvested by Baker Lake hunters, but all were harvested outside the HHS boundaries.

Lake Trout (*Salvelinus namaycush*) and Lake Whitefish (*Coregonus clupeaformis*) were the most common fish species caught by fisherman in 2024, with Lake Trout reported at lower numbers (i.e., 356 individuals) than the average for the study from 2007 to 2023 (i.e., 667).

SECTION 1 • OVERVIEW

As outlined in the original TEMP (Cumberland 2006) and the June 2019 version (Agnico Eagle 2019), and as a requirement of NIRB Project Certificate No. 004 Terms and Conditions 51 and 54, the Baker Lake Hunter Harvest Study (HHS) was initiated in March 2007 by Agnico Eagle. The HHS was conducted in association with the Baker Lake Hunters and Trappers Association (HTO) to monitor and document the spatial distribution, seasonal patterns, and harvest rates of hunter kills and angler catches within the Meadowbank Regional Study Area (RSA).

After low participation during the first year of the study, methods were strategically adapted, participation increased steadily, and valuable information on harvest patterns in the Baker Lake area was collected. The HHS, through regular visits, contributed to developing a strong relationship with local harvesters, the HTO, and the Government of Nunavut, Department of Environment (GN). Data were provided annually in monitoring reports from 2007 to 2015 and in 2019 to 2023.

The HHS was suspended for three years (2016 to 2018) to develop new approaches and direction. Following consultation with the HTO, Kivalliq Inuit Association (KivIA), GN, and other agencies in November 2016 (Winnipeg) and June 2017 (Ottawa), Agnico Eagle reinitiated the HHS in March 2019, which for the first time also encompassed the Whale Tail RSA as part of the Meadowbank Complex. The study approach was similar to previous years, but suggestions and guidance received during the consultation period were incorporated into the study. The study was conducted from 2020 to 2024 and continues into 2025.

SECTION 2 • OBJECTIVES

The primary objectives of the HHS are to monitor potential project-related effects on harvesting of wildlife by residents of Baker Lake. This objective is achieved by estimating the following key metrics:

1. The distribution of Caribou (*Rangifer tarandus*), Muskox (*Ovibos moschatus),* and Wolverine (*Gulo gulo*) harvest by residents of Baker Lake; and
2. The total level (or an index of) Caribou, Muskox, and Wolverine harvest by residents of Baker Lake.

Other objectives of the HHS, established in consultation with the Terrestrial Advisory Group (TAG), or other participants include:

1) Supporting creel surveys by gathering information on Arctic Char (*Salvelinus alpinus*), Lake Trout (*Salvelinus namaycush*), Lake Whitefish (*Coregonus clupeaformis*), and Arctic Grayling (*Thymallus arcticus*) catch rates and Inuit-use patterns in the Baker Lake area;

2) Understanding regional distribution of hunting and fishing activity;

3) Investigating seasonal timing of hunting and fishing activity; and

4) Determining whether increased harvest and catch rates are associated with the Meadowbank All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR).

As discussed during consultation with stakeholders, the HHS will further seek to: a) increase and maintain the hunter participant rate in the future of the program; b) improve resource protection; c) improve hunter awareness and education; d) increase the integration of Inuit Qaujimajatuqangit (IQ) and Traditional Knowledge (TK); e) increase availability of data to support a collective approach to understanding wildlife harvest; and f) assist Agnico Eagle in mitigative actions and the GN in management decisions.

SECTION 3 • METHODOLOGY

The wildlife species that are the focus of the HHS are Caribou, Muskox, and Wolverine; however, harvest data on other species, such as Grizzly Bear (*Ursus arctos*), Wolf (*Canis lupus*), Arctic Fox (*Vulpes lagopus*), geese, and other birds are also collected. The few species in the study were deliberately chosen to make data entry and collection as simple as possible. To support creel surveys, data on fish harvest (i.e., Arctic Char, Lake Trout, Lake Whitefish, and Arctic Grayling) are also collected.

Inuit and non-Inuit residents, at least 16 years of age, are eligible to participate in the harvest survey. Harvest calendars are provided on a household basis, rather than an individual basis, to simplify data entry and collection, and reflect household hunting patterns. The harvest calendar is attractive and consists of local photographs of wildlife and Baker Lake residents primarily taken by HHS participants (see **Appendix A).** At the end of the calendar are maps that delineate a 4 km^2 UTM grid within the Baker Lake and Meadowbank Complex areas. Each grid has a unique code to facilitate recording of information. When calendars are issued, participants or participating households are encouraged to write harvest details (e.g., number of animals, sex, age, and location [i.e., grid code]) for the appropriate date on the calendar.

Participants were interviewed in person three times during the year (i.e., June 2024, November 2024, and January 2025) by the harvest study coordinator. During the January 2025 interviews, remaining data from 2024 were collected. The purpose of the interviews is to ensure all harvest data are recorded on the calendars and to collect incidental information to compliment calendar data, including notable Caribou movements, aggregations, and unique observations. Between interview periods, participants were often contacted by phone or social media to encourage recording of harvest data.

Features of the 2024 HHS included: 1) building long-term relationships between participants and researchers; 2) increasing engagement with participants on social media platforms such as Facebook and Instagram; 3) continuing incentives for participating in the study (e.g., gas vouchers and prizes); and 4) special prizes for the 20 longest standing participants.

SECTION 4 • HISTORICAL RESULTS

The Baker Lake HTO member list (provided by Ms. Joan Scottie [HTO Board Member] in 2008) consisted of 683 local area hunters/trappers/fishermen, a number that has likely changed since then. The member count in 2008 was a highly conservative (i.e., high) estimate of the number of individuals that hunt, trap or fish in the community as the list typically includes entire families. If just the heads of each household are counted, there were 389 potential hunters within the Baker Lake community in 2008. Although this value is still likely conservative (given that many of these individuals do not actively hunt or fish), the number is comparable to the comprehensive 5-year Nunavut Wildlife Harvest Study (NWMB 2004) in which 336 Baker Lake hunters were contacted and interviewed.

Between 1996 and 2001, 18% of Caribou harvests were estimated to be within 5 km of the AWAR (prior to construction) and 67% of harvests occurred within the RSA (NWMB 2004). In the first year of the HHS study (2007), prior to completion of the AWAR, 34% of harvests were reported within 5 km of the AWAR alignment and 79% were recorded within the RSA. The HHS data (2007 to 2015 and 2019 to 2023) fluctuated between 34 and 43% of reported harvest within 5 km of the AWAR, and between 62 and 85% within the RSA.

In 2008, 296 Caribou were reported as being harvested by Baker Lake HHS study participants. Harvest numbers steadily increased to 680 in 2011, and then decreased to 269 in 2014, the lowest reported harvest in seven years, and 305 in 2015. Between 2016 and 2018 (3 years) the HHS was not conducted. Total Caribou harvests in 2019 (648 animals) and 2020 (652) were higher than in 2021 (513), lower than in 2022 (766), and comparable to 2023 (646). If an average of approximately 20% of all Baker Lake hunters actively participated in the study (5% estimated for 2014), extrapolation of historical HHS values suggests approximately 3,000 to 4,000 Caribou are harvested each year in the Hamlet of Baker Lake. These estimates are in general agreement with historical harvest studies. Specifically, using the upper limit of the standard error in the Nunavut Wildlife Harvest Study (NWMB), between 2,230 and 3,116 Caribou were harvested each year between 1996 and 2001 (NWMB 2004). Similarly, the Interdisciplinary Systems (IDS) report (IDS 1978) estimated an annual Caribou harvest in Baker Lake of 4,100 during the 1970s.

Based on the NWMB (2004) and HHS results (2007 to 2015 and 2019 to 2023), highest Caribou harvests have occurred between August and December with a second smaller peak between March and May. The similar pattern between the studies indicates that seasonal hunting preferences have not changed markedly in the last two decades.

Reported harvests of Muskox and Wolverine were relatively high in 2023. Low densities of these species and their general aversion to humans require hunters to hunt well away from the AWAR; therefore, the presence of the AWAR is thought to have little effect on participant hunting patterns for Muskox and Wolverine. Wolverine harvest reports decreased from 15 animals in 2010 to one (1) animal in 2015; however, in 2019, 2020, 2022, and 2023 reported Wolverine harvests were at all-time highs of 18, 22, 25, and 18 individuals, respectively.

SECTION 5 • 2024 HUNTER HARVEST STUDY RESULTS

5.1 NUMBER OF HUNTERS

The HHS included 77 participants by the end of 2024, which is higher than participants in 2023, 2022, and 2021 (i.e., 75, 59, and 55 respectively). Higher numbers in 2024 are because of a higher number of new participants relative to those that have left the study. Of the 2024 participants, Caribou harvest data were collected from 64 participants, which is slightly higher than the 63 participants reporting Caribou harvests in 2023 and considerably higher than the 55 hunters reporting harvests in 2022. The 64 participants reporting Caribou harvest in 2024 is the highest number since the HHS began.

Based on the previous discussion of total numbers of hunters in the Hamlet of Baker Lake (**Section 4 Historical Results**), there were 389 potential hunters within the Baker Lake community in 2008. The number is comparable to the comprehensive 5-year Nunavut Wildlife Harvest Study (NWMB 2004) in which 336 Baker Lake hunters were contacted and interviewed. Discussions with Baker Lake HTO members in 2019 suggest the total number of hunters is over 300. Given the historical and current number of hunters in Baker Lake, an estimate of 300 to 350 active hunters is used in this analysis. Based on these numbers, the 64 hunters reporting Caribou harvest in 2024 conservatively represent from 18 to 21% of total hunters in the community.

5.2 DISTRIBUTION OF HUNTING

Figure 5.1 shows the distribution of Caribou harvest within the HHS data collection area. Hunting is highly concentrated in the vicinity of the Hamlet of Baker Lake and along the AWAR to approximately Km 85. More moderate harvests were reported along the northeastern and southwestern shores of Baker Lake, while limited hunting was reported within the Thelon River system to Aberdeen Lake. Annual variation in harvest location and intensity is attributable to numerous factors. For instance, many hunters have stated during informal discussions that they have a ‘favorite’ hunting area that they frequent each year. Some hunters have stated that they prefer hunting in ‘convenient’ locations, whereas other hunters prefer remote locations well away from frequented areas. A percentage of hunters also enjoyed partaking in long distance hunting trips over multiple days.

Between 1996 and 2001, 18% of Caribou harvests were estimated to be within 5 km of the AWAR (prior to construction) and 67% of harvests occurred within the Meadowbank RSA (NWMB 2004). In the first year of the HHS study (2007), prior to completion of the AWAR, 34% of harvests were reported within 5 km of the AWAR alignment and 79% were recorded within the Meadowbank RSA (see **Table 5.1**). The HHS data (2007 to 2015 and 2019 to 2023) fluctuated between 30 and 54% of reported harvest within 5 km of the AWAR, and between 62 and 85% within the Meadowbank RSA. The 2024 HHS data indicated that 48% of reported harvest occurred within 5 km of the AWAR and 82% occurred within the Meadowbank RSA, which are within the ranges observed in the study to date (see **Table 5.1**). As was the case in other years, threshold levels of 20% set for monitoring the effects of the Meadowbank mine development (note – does not include the Whale Tail mine, which was approved under a separate permit with a different effects assessment) on the distribution of Caribou harvest within the RSA were not exceeded (see **Figure 5.2**).

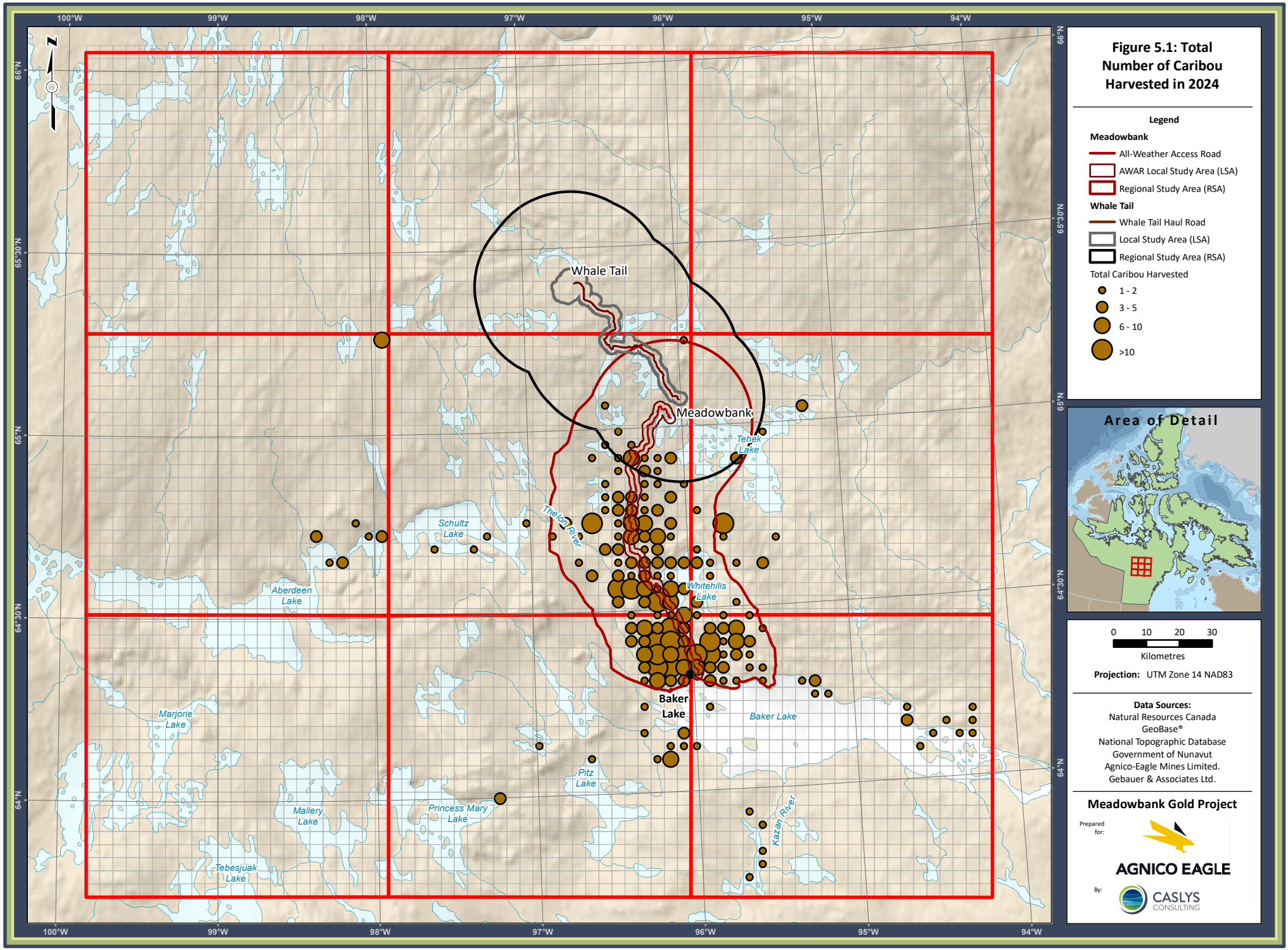

Figure 5.1: Total Number of Caribou Harvested in 2024
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Caribou Harvested
1 - 2
3 - 5
6 - 10
>10
Area of Detail
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
66°N
65°30'N
65°N
64°30'N
64°N
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING

Table 5.1: Caribou Harvest Distribution along the AWAR and within the Meadowbank LSA and RSA (1996 to 2001 [NWMB], and 2007 to 2015 and 2019 to 2024 [Baker Lake HHS]).

Study	Participation Rate within 5 km of AWAR (% of total hunters)	Average Caribou Harvest within 5 km of AWAR per Participant	% of Annual Harvest within 5 km of AWAR	% of Annual Harvest within Meadowbank LSA	% of Annual Harvest within Meadowbank RSA
NWMB 1996 to 2001	n/a	n/a	18	7	67
Baker Lake HHS 2007	17 (49%)	4.8	34	12	79
Baker Lake HHS 2008	16 (94%)	6.9	37	28	73
Baker Lake HHS 2009	27 (75%)	7.9	36	20	78
Baker Lake HHS 2010	33 (89%)	7.3	38	22	73
Baker Lake HHS 2011	40 (85%)	7.1	42	25	74
Baker Lake HHS 2012	31 (67%)	5.6	35	20	80
Baker Lake HHS 2013	38 (86%)	4.8	43	27	85
Baker Lake HHS 2014	19 (70%)	5.7	40	28	83
Baker Lake HHS 2015	24 (67%)	6.9	54	34	84
Baker Lake HHS 2019	40 (95%)	5.4	34	22	64
Baker Lake HHS 2020	34 (79%)	5.8	30	19	62
Baker Lake HHS 2021	34 (87%)	6.6	43	32	71
Baker Lake HHS 2022	50 (91%)	6.0	39	24	70
Baker Lake HHS 2023	43 (68%)	5.6	37	17	71
Baker Lake HHS 2024	54 (84%)	7.3	48	24	82
Average (2007 to 2023)	32 (79%)	6.2	39	24	75
Average (2007 to 2024)	32 (79%)	6.2	39	24	75

In 2024, no Caribou were harvested within 5 km of the WTHR, which compares to no reported harvest during the NWMB harvest study, one (1) Caribou harvest in 2023, no Caribou in 2022, and three (3) in 2021 (see **Table 5.2**). Overall harvest numbers were too low to determine whether harvests have increased following construction of the WTHR. Within the Whale Tail RSA (note – overlaps with the Meadowbank RSA), a total of 33 harvests were reported in 2024, which is just below the average across the first 14 years of the study. Given the low numbers of reported harvests close to the WTHR and the prohibition of the public from the WTHR, it is unlikely that the presence of the road has resulted in increased harvest in this area.

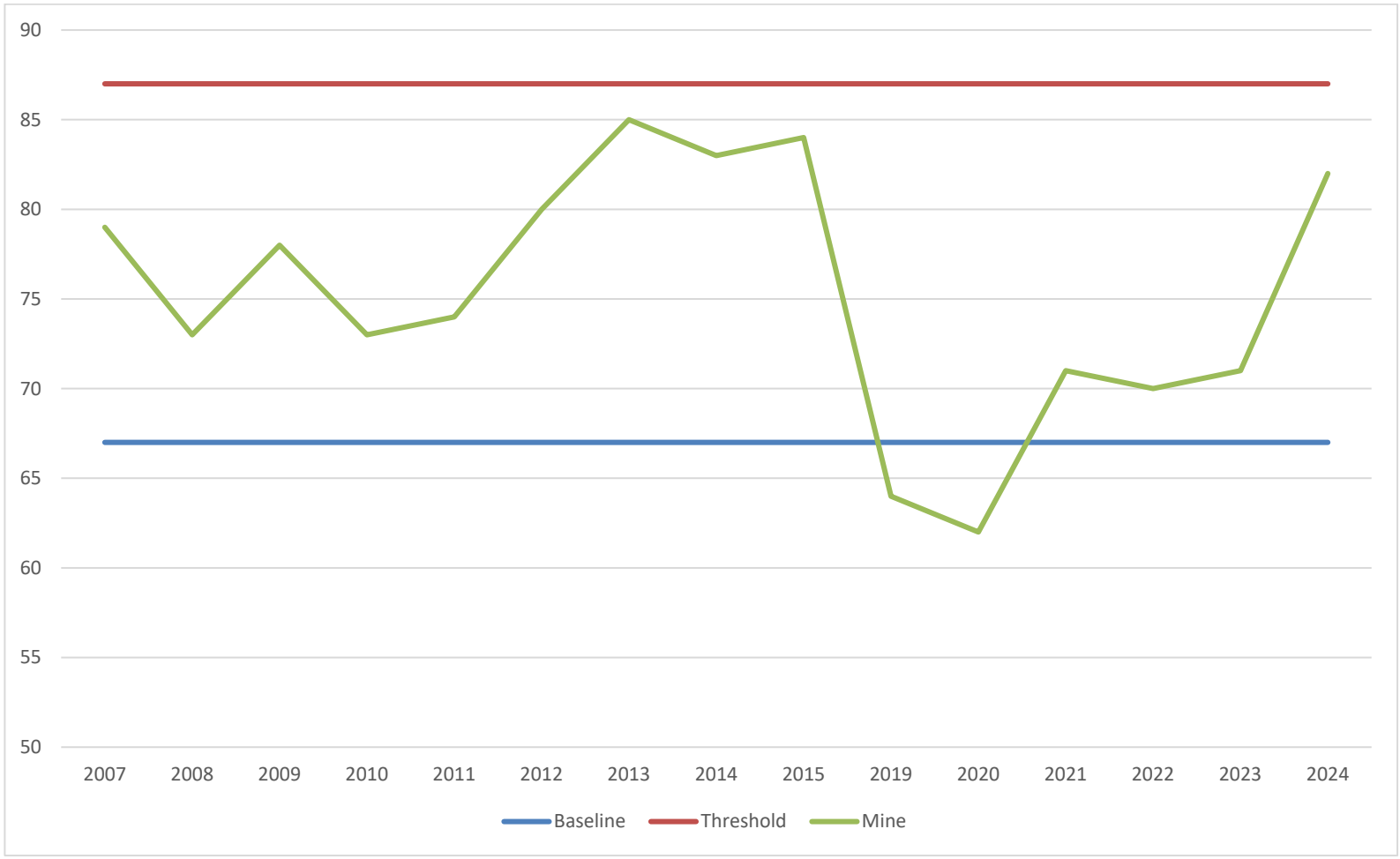


Figure 5.2: Percent of Caribou Harvest within the Meadowbank RSA from 2007 to 2015 (Years 1 to 9), and 2019 to 2024 (Years 10 to 15) Compared to Baseline and Threshold Levels.

Table 5.2: Caribou Harvest Distribution along the WTHR and within the Whale Tail LSA and RSA (1996 to 2001 [NWMB], and 2007 to 2015 and 2019 to 2024 [Baker Lake HHS]).

Study	Annual Harvest within 5 km of WTHR	Annual Harvest within Whale Tail LSA	Annual Harvest within Whale Tail RSA
NWMB 1996 to 2001	0	0	17
Baker Lake HHS 2007	1	1	1
Baker Lake HHS 2008	0	0	15
Baker Lake HHS 2009	1	0	15
Baker Lake HHS 2010	0	0	20
Baker Lake HHS 2011	0	0	103
Baker Lake HHS 2012	0	0	7
Baker Lake HHS 2013	0	0	16
Baker Lake HHS 2014	0	0	17
Baker Lake HHS 2015	0	0	53
Baker Lake HHS 2019	5	5	85
Baker Lake HHS 2020	0	0	12
Baker Lake HHS 2021	3	3	48
Baker Lake HHS 2022	0	0	34
Baker Lake HHS 2023	1	0	74
Baker Lake HHS 2024	0	0	33
Average (2007 to 2023)	0.79	0.64	35.71
Average (2007 to 2024)	0.73	0.60	35.53

5.3 MAGNITUDE OF HUNTING

In 2024, a total of 820 Caribou were reported as being harvested by 64 participants in the Baker Lake HHS, which includes harvests in the Meadowbank and Whale Tail study areas (see **Table 5.3**). The number of participants reporting harvests and the total number of Caribou harvested are the highest since the HHS was initiated. Given that the 64 hunters represent an estimated 18 to 21% of the Baker Lake hunting community (**see Section 5.1**), the total estimated number of Caribou harvested in 2024 in the Baker Lake community ranged from 3,905 to 4,556 animals, which is higher than in 2023 (3,076 to 3,589), lower than in 2022 (i.e., range of 4,256 to 4,788 animals) and higher than historical predictions (NWMB 2004). According to participants, the Caribou herds stayed far away from the commercial meat plant in Rankin Inlet in 2024; therefore, many hunters from Baker Lake filled the gap and sold Caribou to the plant under its quota system. As well, hunters from Rankin Inlet were forced to travel far and wide, including to Baker Lake and even further west (i.e. Shultz Lake) to harvest Caribou in 2024. A few participants expressed concern about this and the increased number of guide outfitters.

Table 5.3: Hunter Caribou Harvest Statistics from the NWMB (2004) Study and Baker Lake HHS (2007 to 2015; 2019 to 2024), which includes the Meadowbank and Whale Tail Areas.

Baker Lake Hunter Harvest Study – Agnico Eagle Mines Ltd.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
2007	0	7	89	22	44	6	6	6	37	14	5	2	238
2008	13	15	14	10	19	14	25	34	56	47	24	25	296
2009	42	52	41	28	28	18	30	88	114	102	11	33	587
2010	27	35	34	66	47	41	46	67	82	117	48	18	628
2011	14	47	64	53	78	39	42	35	123	108	2	75	680
2012	43	30	60	71	41	44	13	19	39	37	72	27	496
2013	5	47	55	28	18	18	20	46	76	40	35	32	420
2014	13	26	20	42	7	11	4	5	43	68	14	16	269
2015	7	9	17	13	6	46	12	8	66	74	35	12	305
2019	7	25	72	86	30	39	17	29	52	187	55	48	648
2020	6	14	8	14	12	16	18	95	119	151	88	111	652
2021	29	27	61	16	44	23	20	54	90	54	36	56	513
2022	35	15	33	29	79	14	28	113	113	219	46	42	766
2023	21	31	25	61	78	24	11	37	61	151	53	93	646
2024	85	67	30	22	35	10	9	48	141	202	110	61	820
Total #	347	447	623	561	566	363	301	684	1,212	1,571	637	651	7,963
Average	24.8	29.8	41.5	37.4	37.7	24.2	20.1	45.6	80.8	104.7	42.5	43.4	530.9
% of Total	4.4	5.6	7.8	7.0	7.1	4.6	3.8	8.6	15.2	19.7	8.0	8.2	100.0

Table 5.3: Continued.

Nunavut Wildlife Harvest Study - Nunavut Wildlife Management Board (NWMB)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
1996						141	190	490	428	435	202	178	2,064
1997	118	144	146	167	217	159	162	354	322	553	295	196	2,833
1998	137	124	192	193	159	85	163	153	272	407	254	135	2,274
1999	137	131	99	211	222	111	148	433	528	409	74	66	2,569
2000	96	86	75	135	213	76	187	333	309	98	186	163	1,957
2001	150	126	146	156	127								705
Total #	638	611	658	862	938	572	850	1,763	1,859	1,902	1,011	738	12,402
Average	127.6	122.2	131.6	172.4	187.6	114.4	170.0	352.6	371.8	380.4	202.2	147.6	2,067
% of Total	5.1	4.9	5.3	7.0	7.6	4.6	6.9	14.2	15.0	15.3	8.2	6.0	100.0

5.4 SEASONAL DISTRIBUTION AND TIMING OF HUNTING

Based on the NWMB (2004) and inclusive Baker Lake HHS results (2007 to 2015; 2019 to 2024), highest Caribou harvests have occurred between August and December, with a second smaller peak between March and May (see **Figure 5.3**). The similar pattern between the studies indicates that seasonal hunting preferences have not changed markedly in the last decade. More details on the seasonal timing of harvest in 2024 can be found in **Figure 5.4** (i.e., numbers of animals harvested, numbers of participants, and average number of animals harvested by participant by month) and **Figure 5.5** (i.e., Caribou harvest numbers by season and proximity to the access roads).

The seasonal distribution of hunting is illustrated in **Figures 5.6a** to **5.6d**, representing the spring, summer, fall, and winter Caribou seasons outlined in the TEMP. In spring 2024, overall Caribou hunting in the Meadowbank RSA was moderate with hunting occurring primarily west of the AWAR from the Hamlet of Baker Lake to the south end of Third Portage Lake around the Km 85 mark (**Figure 5.6a**). Within the Whale Tail RSA, one or two Caribou were harvested at the south end of Third Portage Lake, which is also within the Meadowbank RSA (**Figure 5.6a**).

During the summer, Caribou in the Meadowbank RSA were harvested across a larger area but particularly along the AWAR up to around Km 85 and near the Hamlet of Baker Lake (**Figure 5.6b**). Some harvesting occurred along the Thelon River to Aberdeen Lake, and along the northeastern and southwestern shores of Baker Lake (**Figure 5.6b**). Several Caribou were harvested up to around Km 85 at the south end of the Whale Tail RSA (**Figure 5.6b**).

In the fall, a considerable amount of hunting occurred and was much more concentrated around the Hamlet of Baker Lake, west of Whitehills Lake, along the AWAR up to near Km 85, and around the Prince River (**Figure 5.6c**). A small number of Caribou were reported as being harvested in the southern portion of the Whale Tail RSA in fall 2024 (**Figure 5.6c**).

In winter, Caribou were hunted at high numbers around the Hamlet of Baker Lake, around Whitehills Lake, and on the west side of the AWAR up to Tehek Lake. Some successful hunters travelled further afield by snowmobile (e.g., along the Thelon River to Aberdeen Lake, and near Princess Mary and Pitz lakes) (**Figure 5.6d**). Scattered Caribou harvests were reported in the Whale Tail RSA (**Figure 5.6d**).

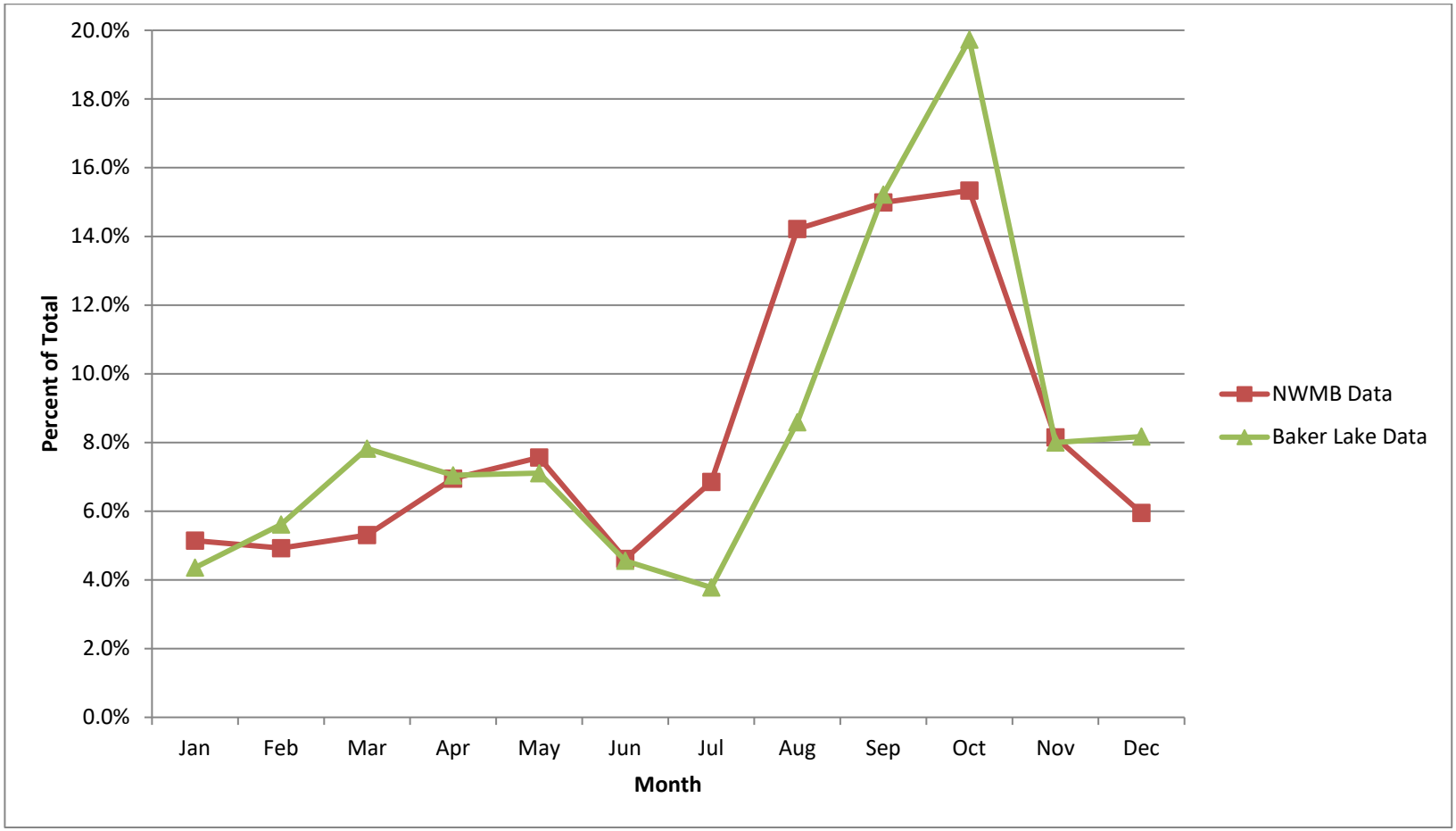


Figure 5.3: Seasonal Trends in Caribou Harvest from the Baker Lake HHS (2007 to 2015; 2019 to 2024) and the NWMB Study (1996 to 2001).

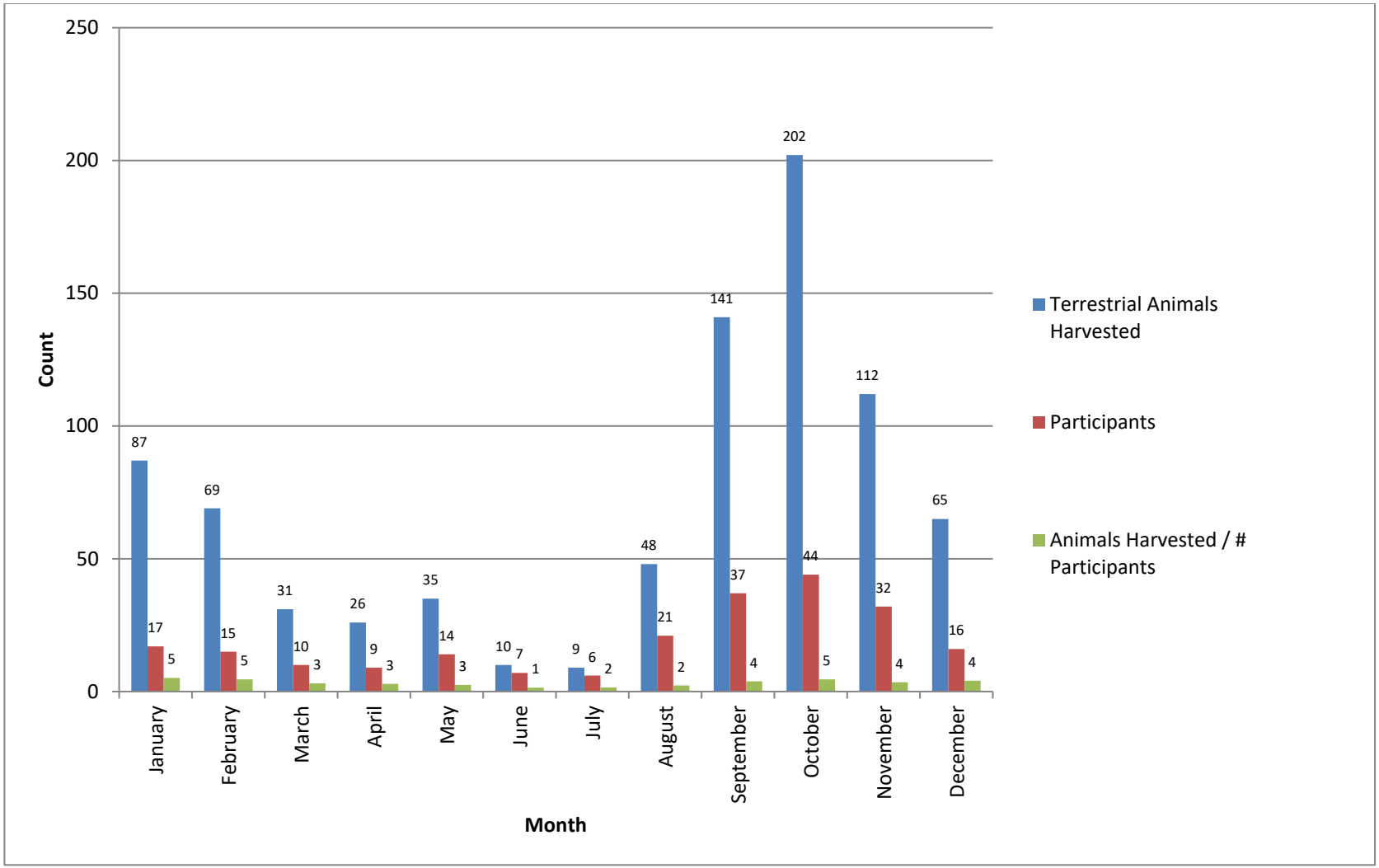


Figure 5.4: Terrestrial Animals Harvested per Month and by Participant in 2024.

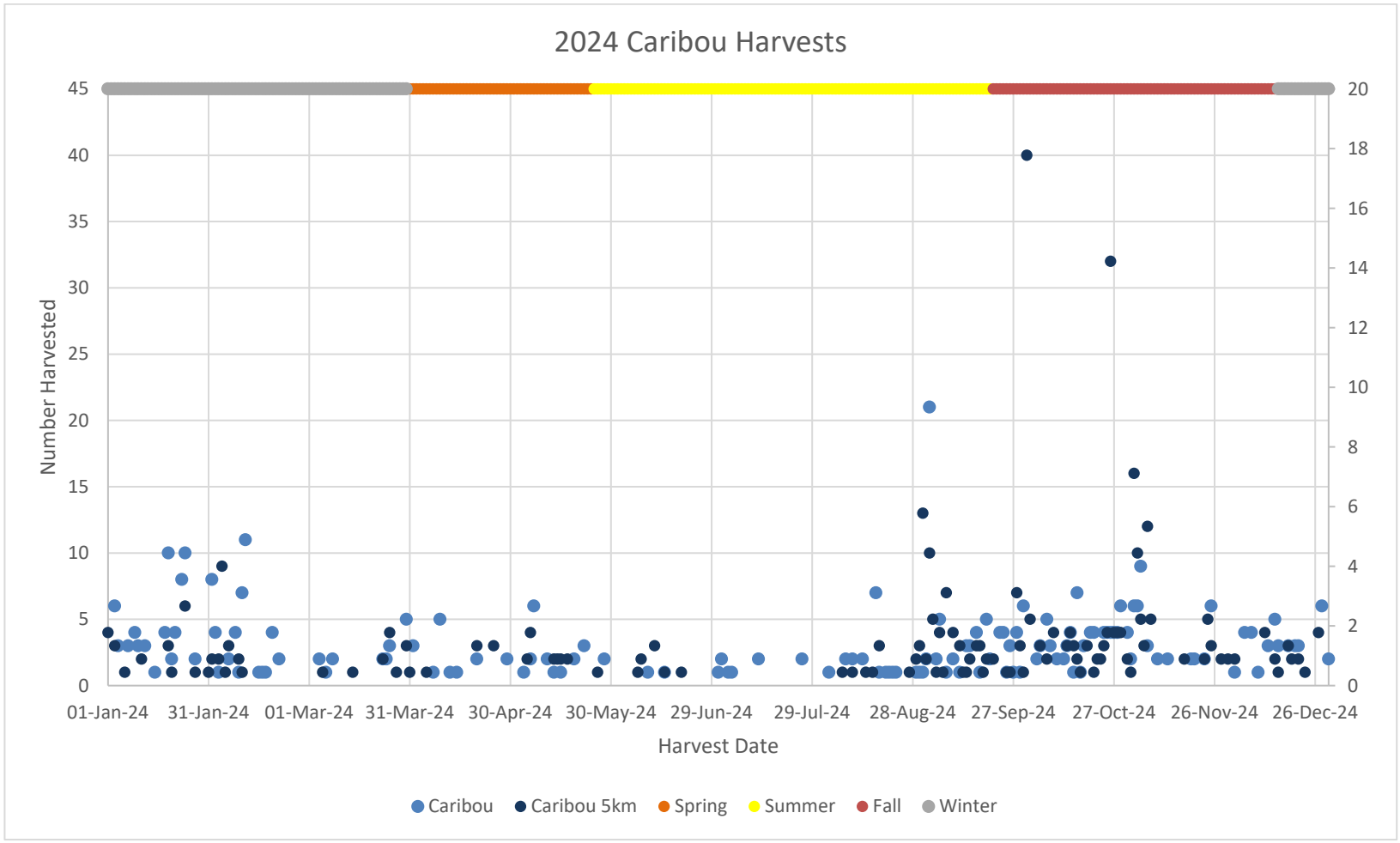
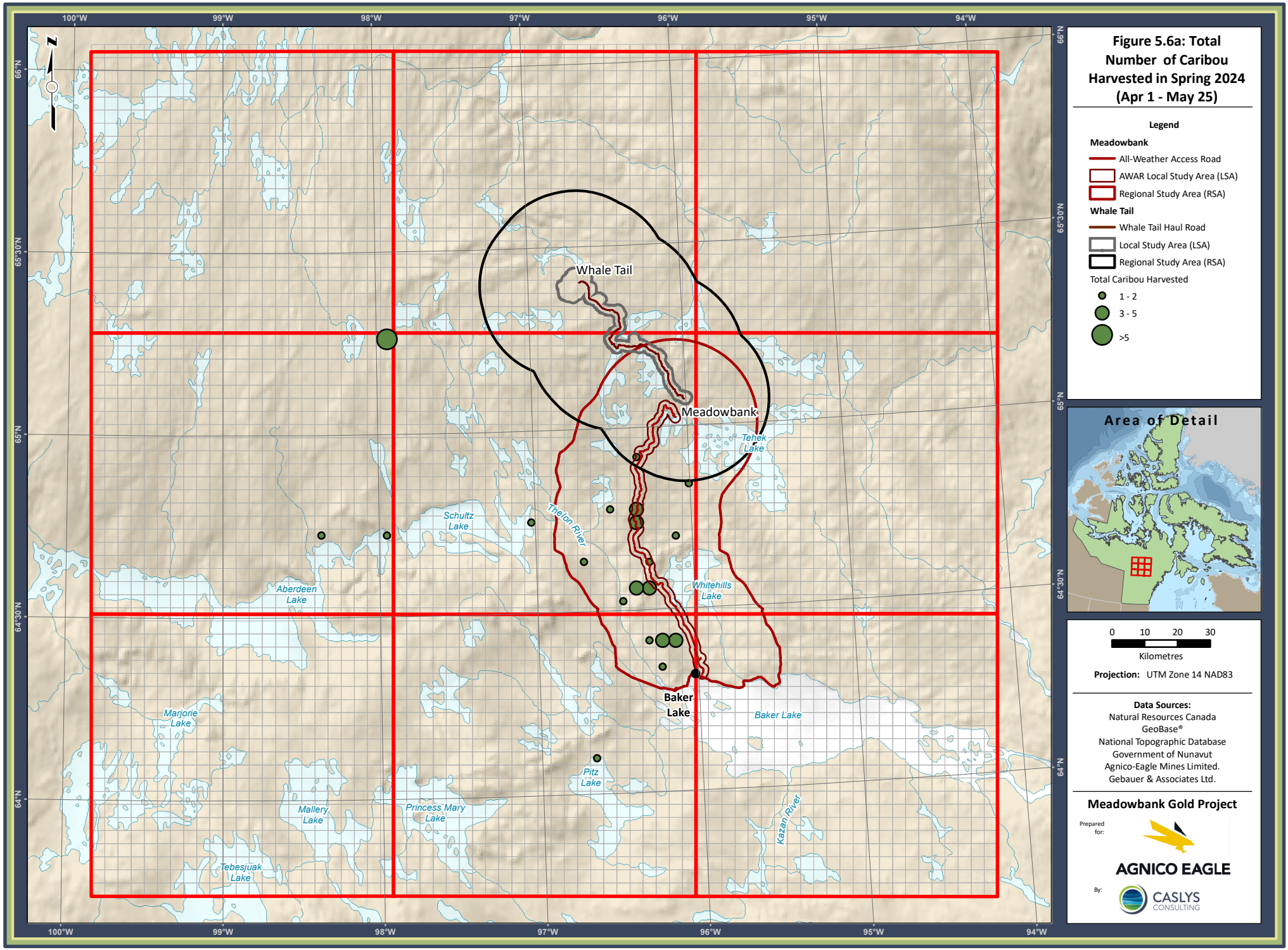
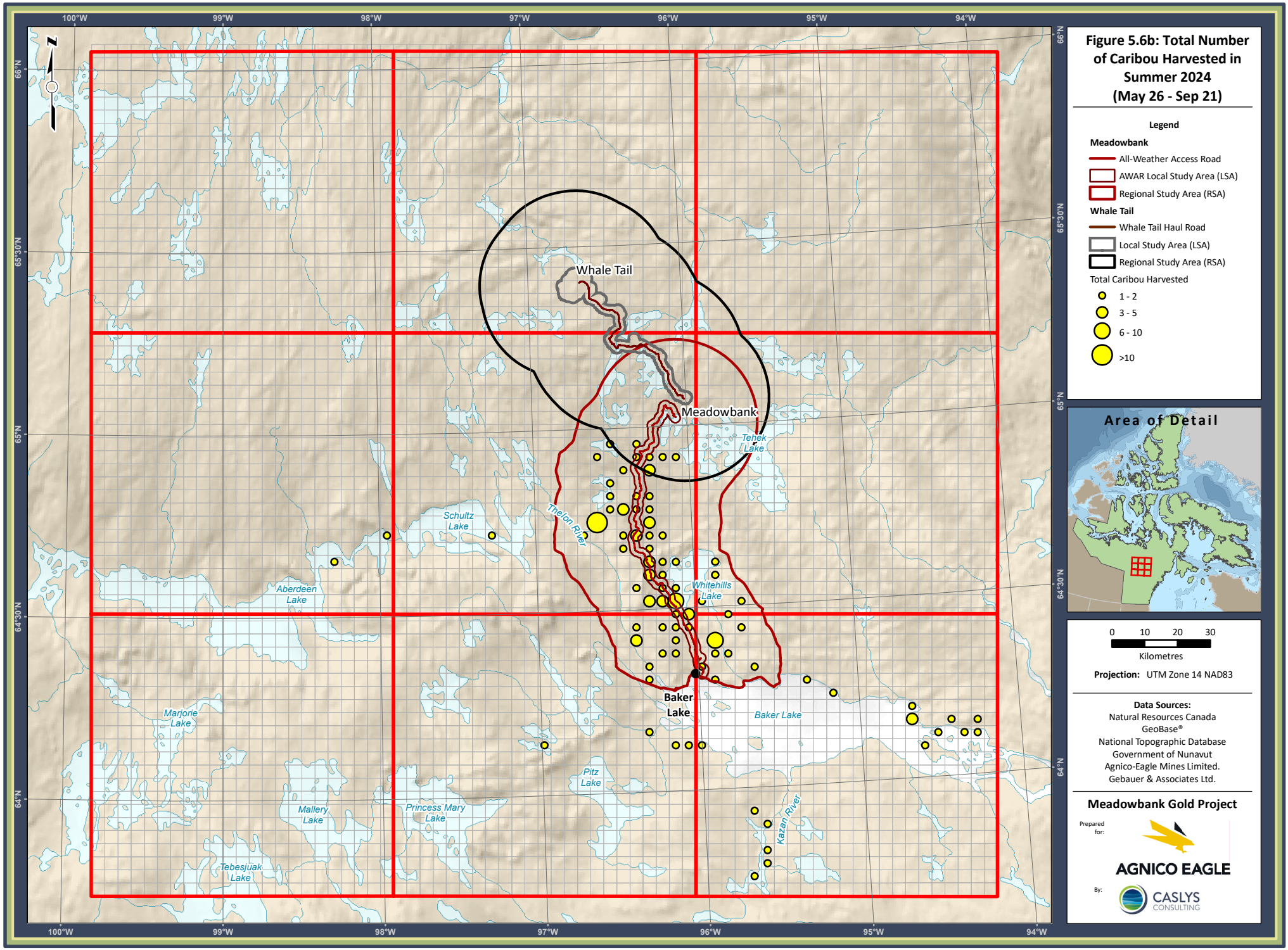
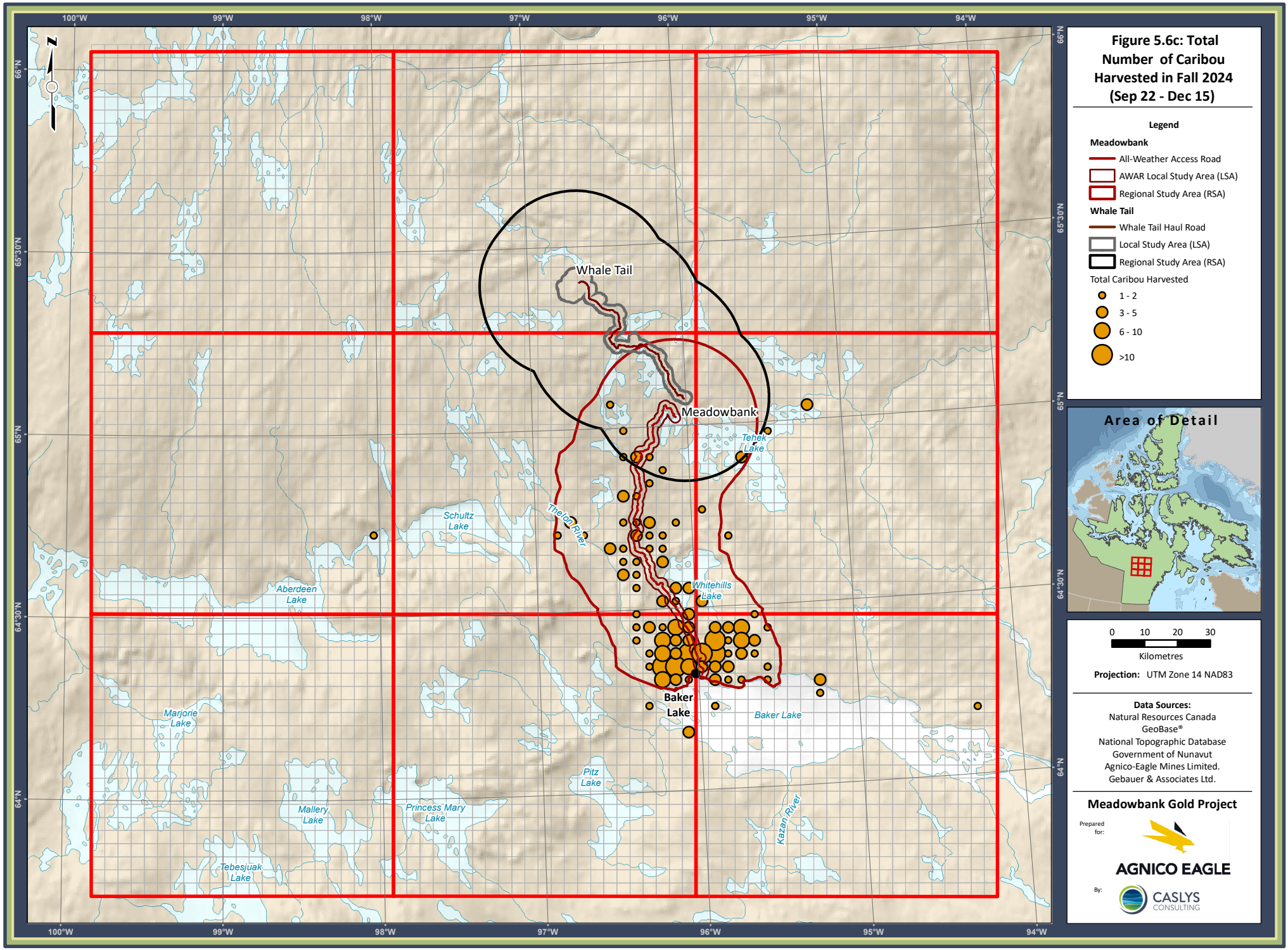
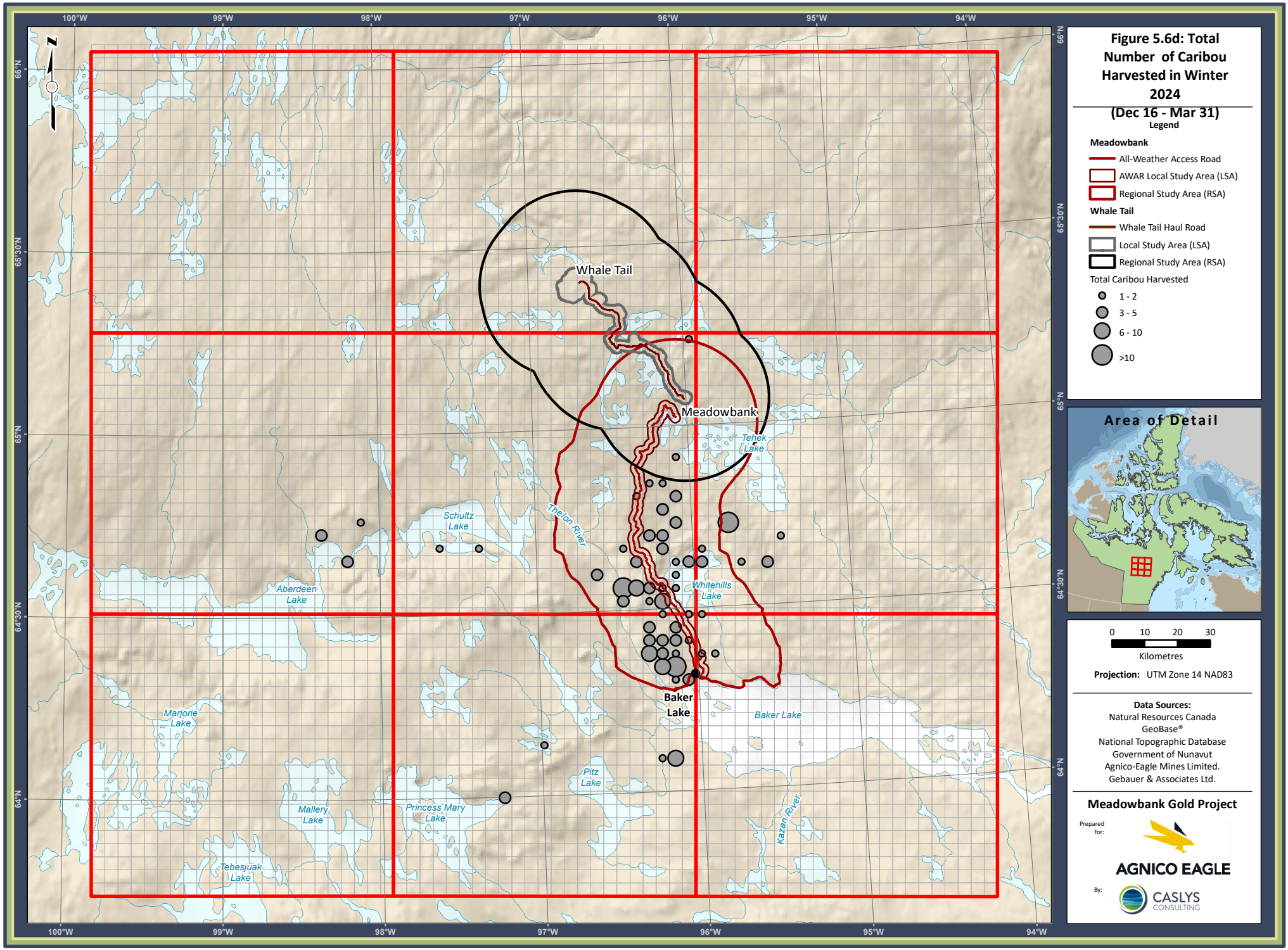


Figure 5.5: Number of Caribou harvested in each Caribou Season and Proximity to Access Roads in 2024.


Figure 5.6a: Total Number of Caribou Harvested in Spring 2024 (Apr 1 - May 25)
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Caribou Harvested
1 - 2
3 - 5
>5
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N


Figure 5.6b: Total Number of Caribou Harvested in Summer 2024 (May 26 - Sep 21)
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Caribou Harvested
1 - 2
3 - 5
6 - 10
>10
Area of Detail
Whale Tail
Meadowbank
Baker Lake
Tehek Lake
Schultz Lake
Thelon River
Whitehills Lake
Aberdeen Lake
Marjorie Lake
Mallery Lake
Princess Mary Lake
Pitz Lake
Kazan River
Tebesjuak Lake
Baker Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING


Figure 5.6c: Total Number of Caribou Harvested in Fall 2024 (Sep 22 - Dec 15)
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Caribou Harvested
1 - 2
3 - 5
6 - 10
>10
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N

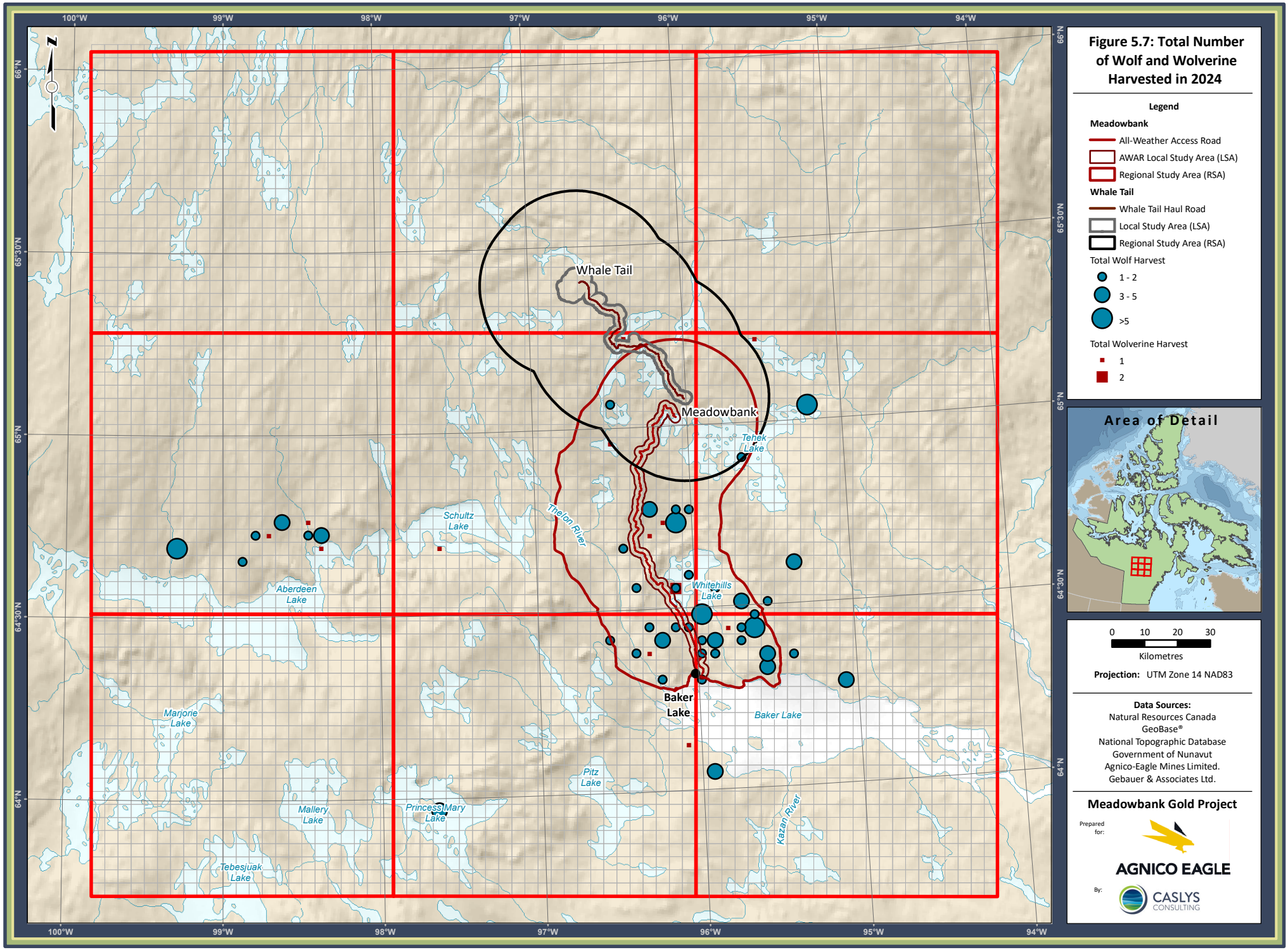

Figure 5.6d: Total Number of Caribou Harvested in Winter 2024
(Dec 16 - Mar 31)
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Caribou Harvested
1 - 2
3 - 5
6 - 10
>10
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N

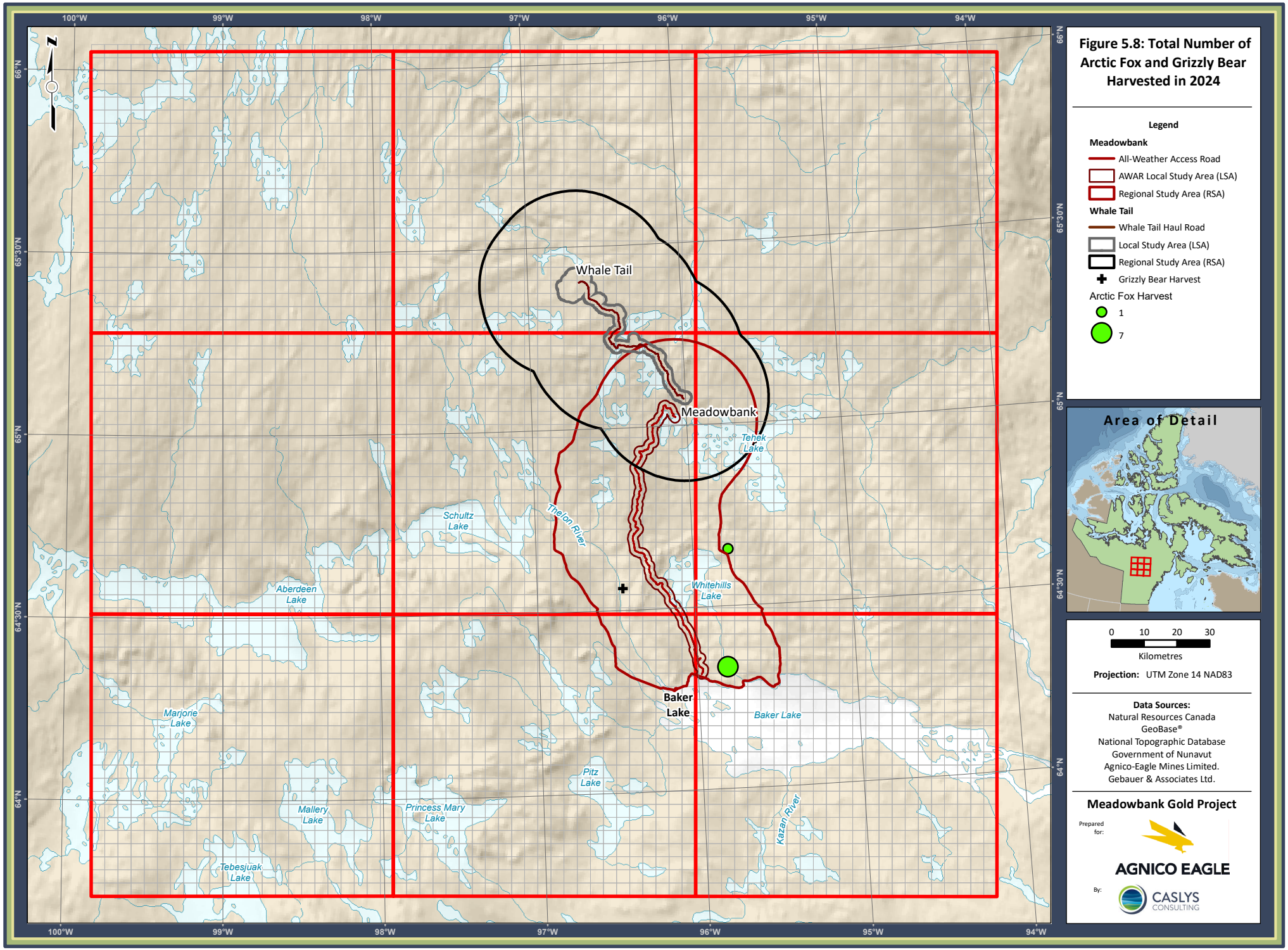
5.5 OTHER WILDLIFE SPECIES

No Muskox was reported as being harvested in 2024, which compares to seven (7) reported Muskox harvests in 2023 and 18 in 2022 (**Table 5.4**). A total of 15 Wolverine were reported in 2024 compared to 18 in 2023 (**Table 5.4**). Wolverine in 2024 was hunted in the Whitehills Lake area, along the Thelon River between Schulz and Aberdeen lakes but especially north of Aberdeen Lake, and at the southwestern end of Baker Lake (see **Figure 5.7**). Wolf harvest in 2024 (143 individuals) was considerably higher than in 2023 (47), 2022 (92), and 2021 (26) (**Table 5.4**). Wolves were primarily harvested close to Baker Lake, in the Whitehills Lake area, and north of Aberdeen Lake (**Figure 5.7**). Wolves were described as ubiquitous directly adjacent to the town of Baker Lake in 2024, with several participants stating that they had observed packs as large as 60 wolves in the area. Eight (8) Arctic Fox were reported as harvested in 2024 compared to none in 2023, 36 in 2022, and five (5) in 2021 (**Table 5.4**). Arctic Fox were primarily trapped or harvested close to Baker Lake (**Figure 5.8**). Other harvested mammal species in 2024 included two (2) Grizzly Bear, one (1) Ermine (*Mustela richardsonii*), one (1) American Marten (*Martes americana*), five (5) Arctic Ground Squirrel (*Urocitellus parryii*), and 10 Arctic Hare (*Lepus arcticus*). One (1) Grizzly Bear was harvested west of Whitehills Lake while the other was harvested outside the study area (**Figure 5.8**)

Table 5.4: Total Number of Terrestrial Mammal Harvests Reported from 2019 to 2024 in the Baker Lake Hunter Harvest Study.

Species	2019	2020	2021	2022	2023	2024
American Marten (*Martes americana*)				1		1
Arctic Fox (*Vulpes lagopus*)	83	11	5	36		8
Arctic Ground Squirrel (*Urocitellus parryii*)		1				5
Arctic Hare (*Lepus arcticus)*						10
Arctic Wolf (*Canis lupus*)	72	88	26	92	47	143
Barren-ground Caribou (*Rangifer tarandus*)	648	652	513	766	646	820
Ermine (*Mustela richardsonii*)				1		1
Grizzly Bear (*Ursus arctos*)	1	4	1	2	1	2
Moose (*Alces alces*)			1			
Muskox (*Ovibos moschatus*)	4		2	18	7	
Red Fox (*Vulpes vulpes*)		2	2	1	3	
Wolverine (*Gulo gulo*)	20	22	20	25	18	15


Figure 5.7: Total Number of Wolf and Wolverine Harvested in 2024
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Wolf Harvest
1 - 2
3 - 5
>5
Total Wolverine Harvest
1
2
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N


Figure 5.8: Total Number of Arctic Fox and Grizzly Bear Harvested in 2024
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Grizzly Bear Harvest
Arctic Fox Harvest
1
7
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Whitehills Lake
Aberdeen Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N

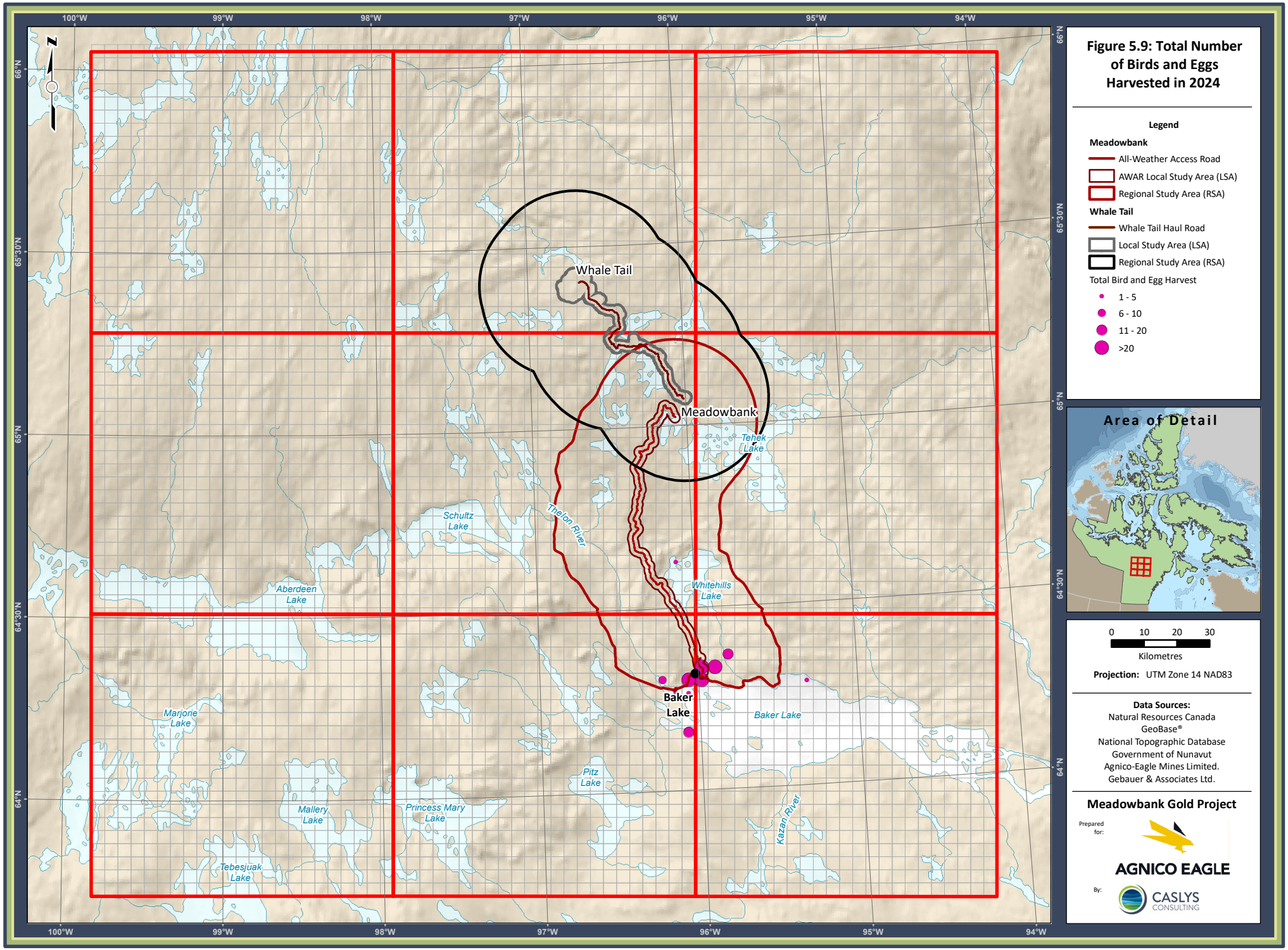
Bird species reported as being harvested in 2024 included ptarmigan sp. (*Lagopus* sp.; 197 individuals – a particularly high number), Canada Goose (*Branta canadensis*; 25), Snow Goose (*Anser caerulescens*; 13), gull species (*Larus* sp.; 10), and Tundra Swan (*Cygnus columbianus*; 2) (**Table 5.5**). **Table 5.5** summarizes bird harvests reported in the HHS from 2019 to 2024.

In 2024, birds were reported as being collected primarily around the Hamlet of Baker Lake (**Figure 5.9)**.

Table 5.5: Total Number of Bird Harvests Reported from 2019 to 2024 in the Baker Lake Hunter Harvest Study.

Species	2019	2020	2021	2022	2023	2024
Canada Goose (*Branta canadensis*)	4	9	22	48	82	25
Goose sp. (*Anser* sp.)	2	91	2			
Greater White-fronted Goose (*Anser albifrons*)	1				2	
Gull sp. (*Larus* sp.)		11		8	2	10
Ptarmigan sp. (*Lagopus* sp.)	11	7	2	25	48	197
Sandhill Crane (*Grus canadensis*)				2	1	
Snow Goose (*Anser caerulescens*)	1	2	2	1	8	13
Tundra Swan (*Cygnus columbianus*)				3	2	2

For the third year in a row, marine mammals were reported as being harvested. Four (4) Ringed Seal (*Pusa hispida*) were reported as being harvested by Baker Lake hunters, but these were outside the HHS boundaries.


Figure 5.9: Total Number of Birds and Eggs Harvested in 2024
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Bird and Egg Harvest
1 - 5
6 - 10
11 - 20
>20
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N

SECTION 6 • 2024 CREEL SURVEY RESULTS

6.1 NUMBER OF FISHERMEN

The number of fishermen reporting successful fishing trips in 2024 was 34, which is higher than the average of 25 fisherman from 2007 to 2015 and 2019 to 2023 (14 years), and slightly higher than the number of fisherman reporting success in 2023 (i.e., 30). The highest number of fisherman reporting success in 2024 were in May and June, which is consistent with seasonal fishing patterns in other years (see **Table 6.1** and **Section 6.4 Magnitude of Fishing**).

Table 6.1: Number of Fisherman in the Baker Lake Area who have Recorded Fishing Success by Year and Month.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007			4	6	7	1	1		1				20
2008	1	1	2	6	6	6	4	3			2	1	32
2009	2	2	5	10	9	9	9	6	1	8	2	2	65
2010			6	13	18	17	13	4	2	2	3	1	79
2011	1	3	6	15	21	18	9	6	2	9	9	5	104
2012	3	1	1	7	7	18	12	4	3	9	7	3	75
2013			2	5	4	11	9	1		2	1	1	36
2014	2	1	1	4	6	3	4	2		2	2	2	29
2015	1	1	1	2	9	8	6	2		3	4	2	39
2019	1	2	3	12	14	15	7	3	1	1	8	4	71
2020				1	6	9	9	5	1	4	3		38
2021	1		3	3	15	15	3	4	1	1	4		50
2022	2		2	4	16	16	7	2	3	3	2		57
2023				10	13	12	6	7	2	2	5		57
2024	1			2	18	12	6	3		3	4	1	50
Total	15	11	36	100	169	170	105	52	17	49	56	22	802

6.2 COMPOSITION OF CATCH

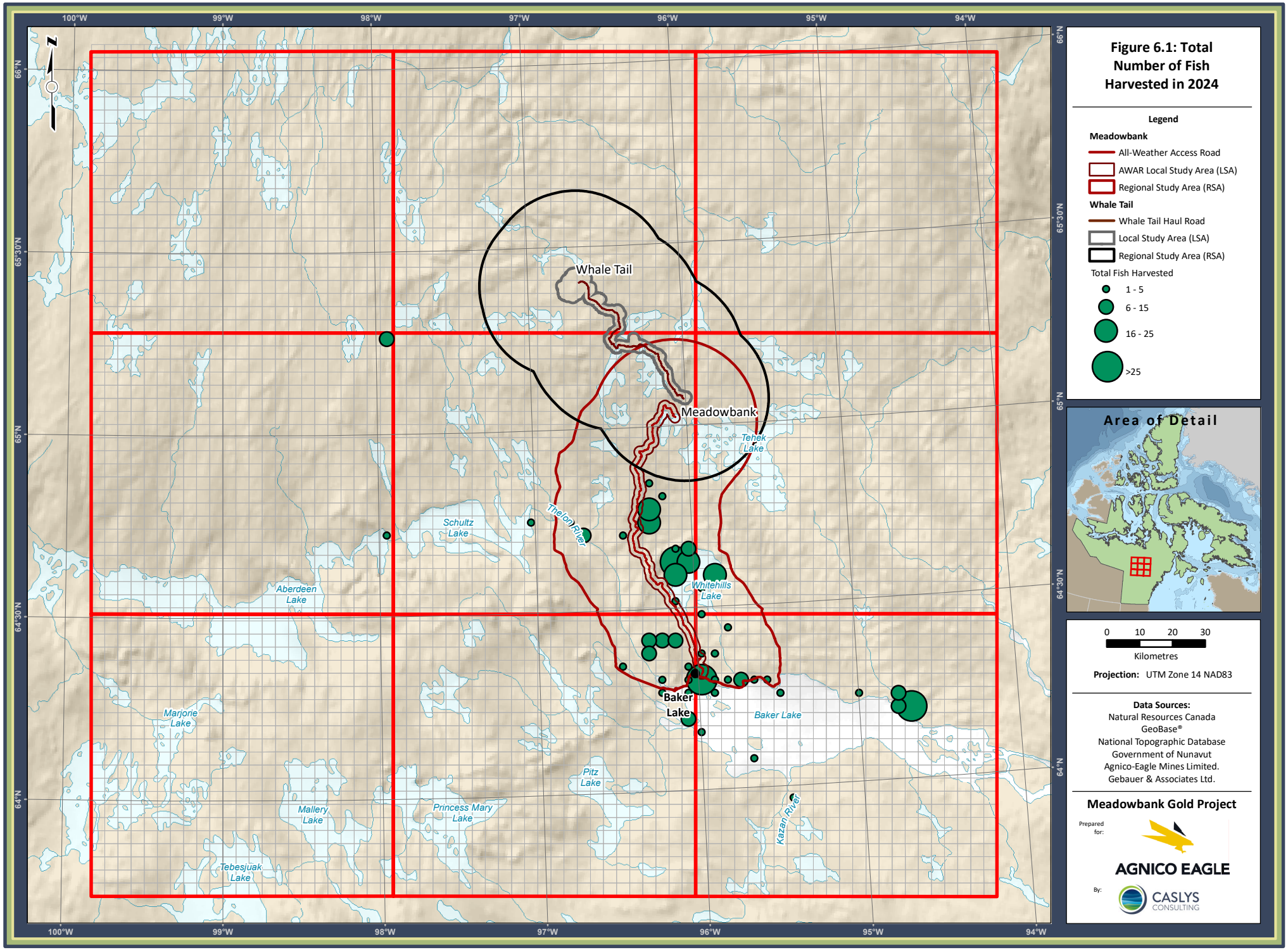
The most common fish species captured, Lake Trout, represented 51% of the total catch in 2024, which was lower than in the last four years (i.e., 2020 to 2023) (see **Table 6.2**). Lake Trout catch in 2024 (i.e., 356 individuals) was lower than the average of 667 from 2007 to 2015 and 2019 to 2023 (see **Table 6.2**). Arctic Char were caught at lower numbers in 2024 (48 individuals) than the average of 73 from 2007 to 2015 and 2019 to 2023 (see **Table 6.2**). Lake Whitefish were captured in moderate numbers in 2024.

Table 6.2: Total Number of Fish Caught between 2007 and 2015, and 2019 to 2024.

Year	Arctic Char	Arctic Grayling	Lake Trout	Lake Whitefish	Unidentified	Total #	%Char	% Lake Trout
2007	3		210			213	1	99
2008	24		825	192		1,041	2	79
2009	117	1	525	51		694	17	76
2010	103	3	860	326		1,292	8	67
2011	113	1	1,710	460		2,284	5	75
2012	24	1	1,014	471		1,510	2	67
2013	96		490	50		636	15	77
2014	22		353	651		1,026	2	34
2015	41	29	370	1,386		1,826	2	20
2019	89		900	1,573	119	2,681	3	34
2020	75		219	32	2	328	23	67
2021	54	1	481	184	1	721	7	67
2022	202	1	894	147		1,244	16	72
2023	52		490	183	2	727	7	67
Avg # (2007-2023)	**73**	**3**	**667**	**408**	**9**	**1,159**	**8**	**64**
2024	48		356	300		704	7	51
Avg # (All Years)	**71**	**2**	**646**	**400**	**8**	**1,128**	**8**	**63**
Total #	**1,063**	**37**	**9,697**	**6,006**	**124**	**16,927**		

6.3 DISTRIBUTION OF FISHING

Fishing trips, regardless of success rate, did not generally occur beyond the immediate areas of Baker Lake, Whitehills Lake, and the lower AWAR (see **Figure 6.1**). Some fishing occurred along the Thelon River system and along the northeastern shore of Baker Lake (**Figure 6.1)**. As was the case in other years, results indicate that study participants are less willing to travel long distances to catch fish, regardless of AWAR access, likely due to the abundance of fish near the Hamlet of Baker Lake and around Whitehills Lake.


Figure 6.1: Total Number of Fish Harvested in 2024
Legend
Meadowbank
All-Weather Access Road
AWAR Local Study Area (LSA)
Regional Study Area (RSA)
Whale Tail
Whale Tail Haul Road
Local Study Area (LSA)
Regional Study Area (RSA)
Total Fish Harvested
1 - 5
6 - 15
16 - 25
>25
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
Whale Tail
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Whitehills Lake
Baker Lake
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
100°W
99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N

6.4 MAGNITUDE OF FISHING

The average number of fish harvested per fisherman in each month was highest in November with lower averages in the summer months (**Figure 6.2)**. In 2024, the most captured fish species, in order of abundance, were Lake Trout, Lake Whitefish, and Arctic Char (see **Table 6.2**). Lower numbers of Lake Trout and Arctic Char were reported as being caught in 2024 compared to 2021 through 2023.

6.5 SEASONAL TIMING OF FISHING

In 2024, fishing periods with the most active fisherman was May and June, which is comparable to other years (see **Table 6.1**). Over all reporting years, the periods with the most fish caught included the summer months (May and June), which reflects the high number of Lake Trout caught by fisherman heading out on the land after ice melt, and November (**Figure 6.3**). This trend can be observed in the trends from 2007 to 2015 and 2019 to 2023 (**Figure 6.3)**.

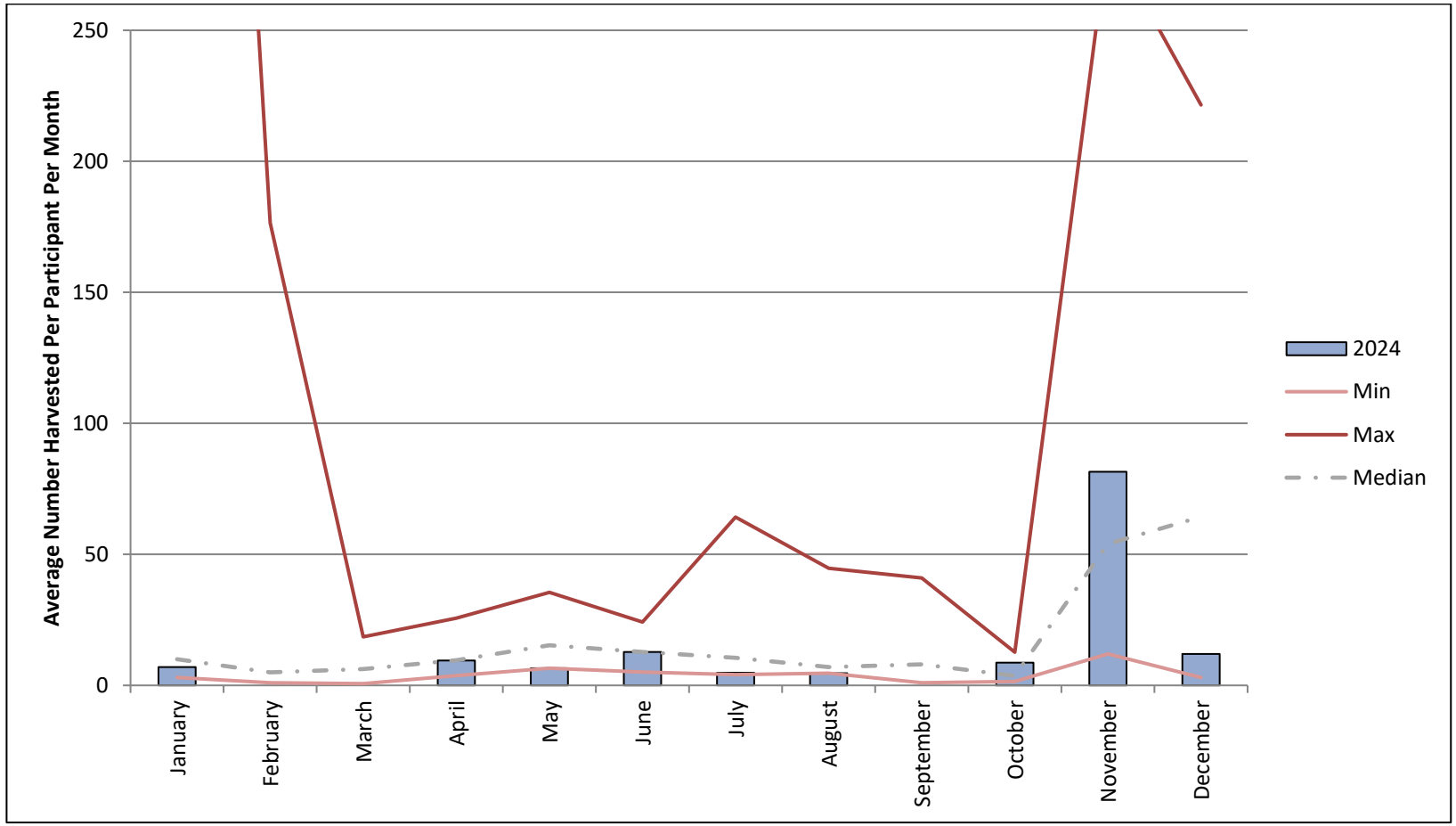


Figure 6.2: Average Number of Fish Caught per Participant in 2024 and the Minimum and Maximum Range from 2007 to 2015 and 2019 to 2023.

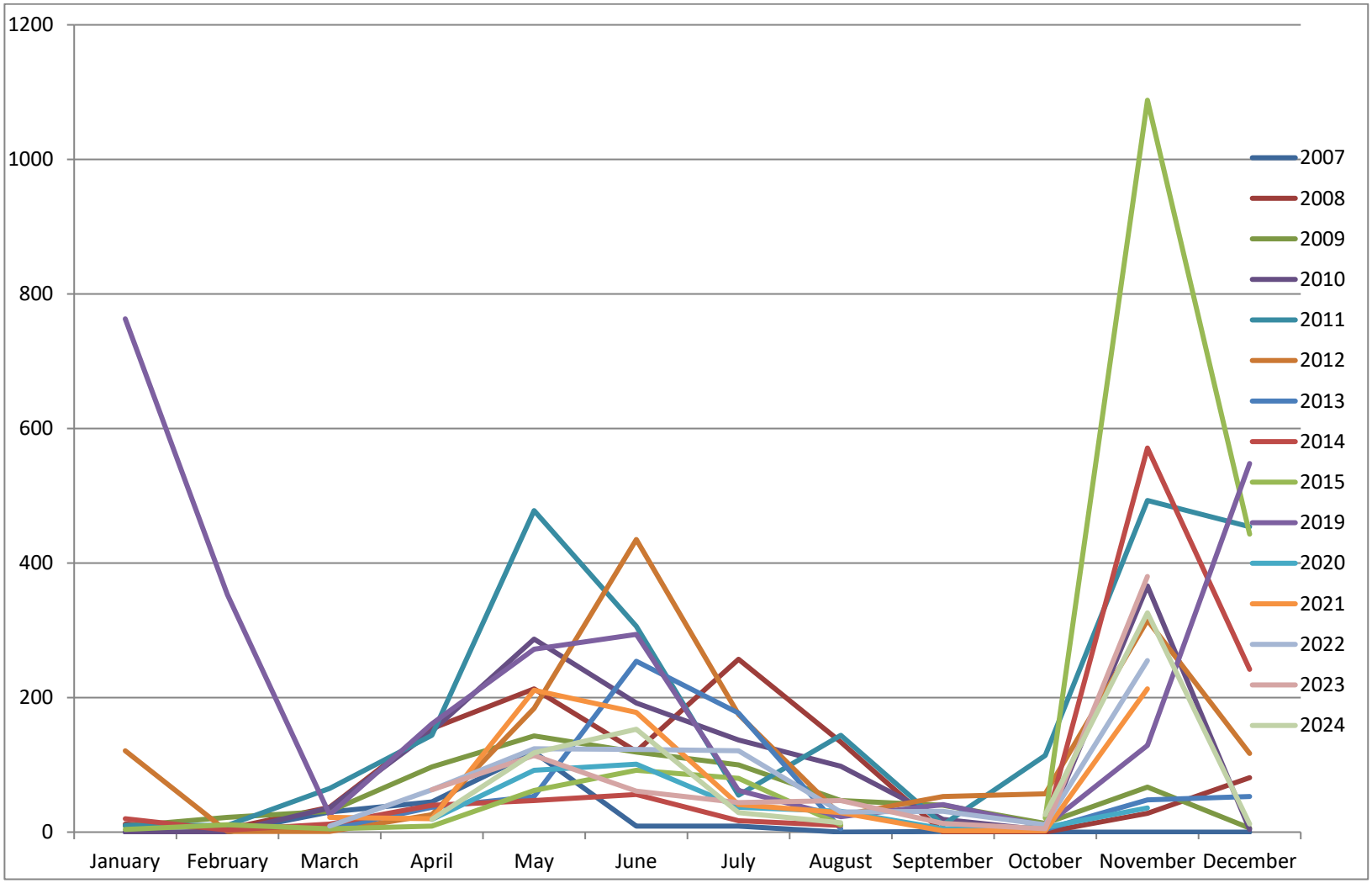


Figure 6.3: Seasonal Trends in Fishing (Number of Fish Caught) in the Baker Lake Area from 2007 to 2015 and 2019 to 2024.

SECTION 7 • ACCURACY OF IMPACT PREDICTIONS

Table 7.1 provides a summary of the impact predictions identified in the original TEMP (Cumberland 2006) and the updated June 2019 version (Agnico Eagle 2019). The 2024 HHS data were compared to the impact prediction thresholds to evaluate adherence to the impact predictions and the provision of adaptive management, as either a necessary or proactive measure. No thresholds were surpassed in 2024.

Table 7.1: Accuracy of Impact Predictions – 2024 Baker Lake HHS

Potential Effect	Threshold	RSA (67-87% of Harvest within RSA) 20% Threshold Exceeded (2024)?	Adaptive Management Implemented	Status
Meadowbank All-Weather Access Road (AWAR)				
Hunting by Baker Lake Residents	The AWAR will not result in significant changes in the spatial distribution, seasonal pattern, or harvest levels of Caribou kills by Baker Lake hunters. Changes will not exceed 20% of historical harvest activities within the RSA	NO (82% of Caribou harvest in RSA in 2024 compared to NWMB baseline of 67% and average harvest within RSA of 75% since 2007)	Future discussion with HTO and GN representatives required to identify management options	HHS Creel Survey
Whale Tail Haul Road (WTHR)				
Hunting by Baker Lake Residents	No change in harvest	NO (No harvests recorded within 5 km of the WTHR)	None required. Access by hunters is restricted in the growing season and very limited hunting occurs in winter.	HHS Satellite-collaring Program

SECTION 8 • MANAGEMENT RECOMMENDATIONS

The Baker Lake HHS and Creel Survey should be continued on an annual basis to monitor the hunting and fishing patterns of Baker Lake residents, and the potential effects of the Meadowbank Complex Mine. Meetings with participants every four months (3 times/year) in 2025 are particularly important in maintaining contact, building relationships, expanding the study, and collecting good harvest data. Participation rates can be maintained by continuing to use social media platforms such as Facebook and Instagram, expanding connections on these platforms, ensuring that all participants are visited during the three scheduled field visits, and continuing with distribution of the well-received year-end prizes while in the community. In addition, an effort should be made to continue recruiting new, particularly young, hunters for the HHS.

SECTION 9 • LITERATURE CITED

Agnico Eagle Mines Ltd. (AEM) 2019. Meadowbank Division, Terrestrial Ecosystem Management Plan. Version 6, June 2019.

Cumberland Resources Ltd. 2006. Meadowbank Gold Mine Project Terrestrial Ecosystem Management Plan (TEMP). Final Report, December 2006.

IDS, Interdisciplinary Systems. 1978.

NWMB, Nunavut Wildlife Management Board. 2004. The Nunavut Wildlife Harvest Study. Prepared by Priest, H., Harvest Study Coordinator, NWMB and Usher, P. J., P.J. Usher Consulting Services.

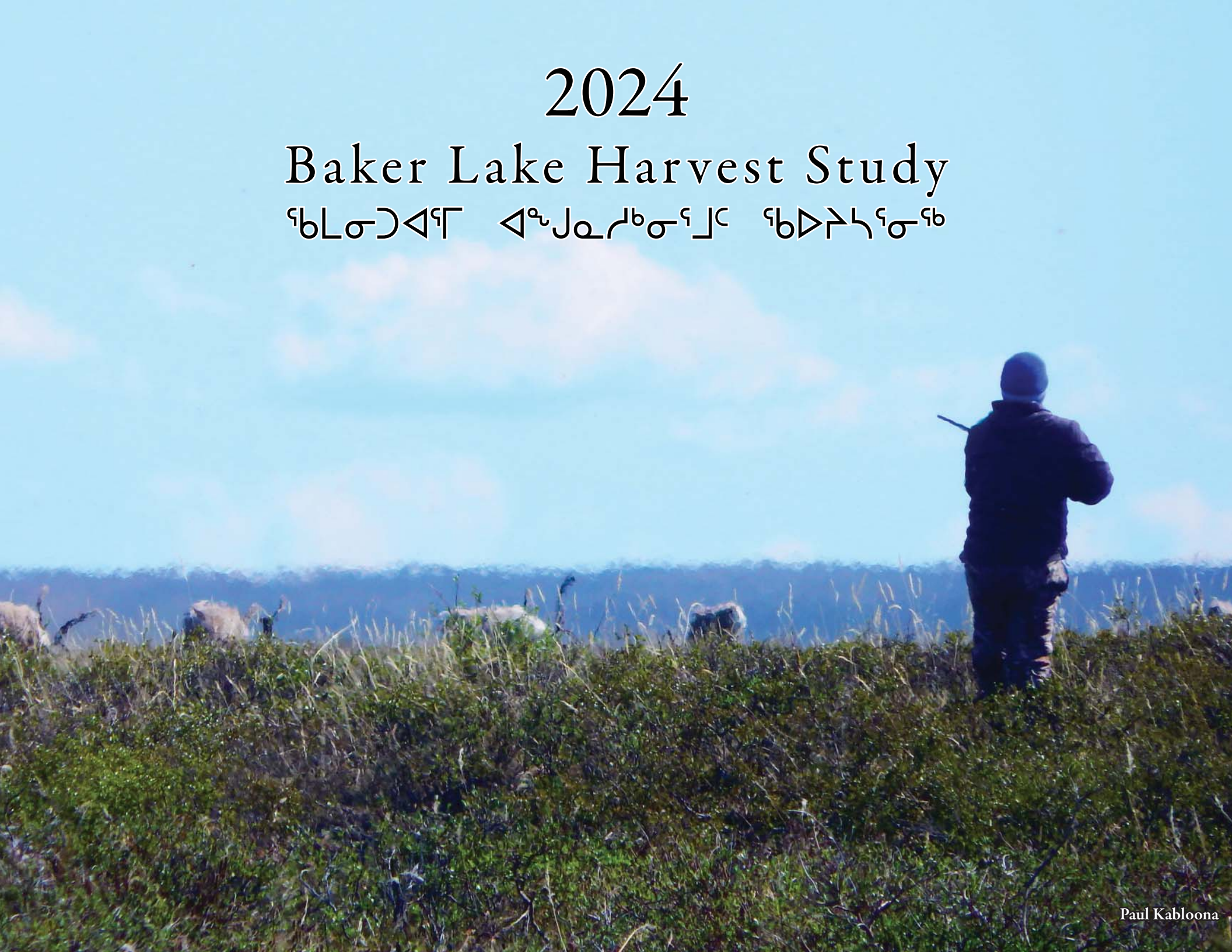
APPENDIX A

2024 Hunter Harvest Calendar

2024

Baker Lake Harvest Study

ᖃᒪᓕᕐᓂᐊᖅ ᐊᖏᔪᓇᓯᒃᓴᓂᖅ ᖃᐅᔨᓴᖅᓱᖅ



Paul Kabloona



Georgina Kammimalik

January | ᓴᓇᐅᒃ 2024

Baker Lake Harvest Study
ᖃᒪᓕᕐᕆᖏᑦ ᐊᖏᔪᓚᐅᓕᖅᑐᑦ ᖃᐅᔨᓴᓕᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒪᓕᓴᖅ	Tuesday ᑐᐱᔪᐊᖏᓇᖅ ᔪᑦᓯᓕᖅ	Wednesday ᐱᖓᓱᐊᑦ	Thursday ᔪᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓄᖃᐃᑐᖏᓇᖅ
	1 New Year's Day	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

December 2023

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

February 2024

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		


Cheryl Cook

February | ᐃᖃᑭᐊᓗ 2024

Baker Lake Harvest Study
ᖃᒪᓕᑐᐊᖏ ᐊᖏᔪᓇᓂᓕᒋᑦ ᖃᐅᔨᓴᓂᖅ

Sunday ᓴᓇᑕᐅᓪ	Monday ᓴᓇᑕᐅᓕᐅᓚᓴᖅ	Tuesday ᑐᑭᓯᐊᖅᓯᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖓᓱᓪᓗᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖅᓯᓯᖅ
				1	2 Groundhog Day	3
4	5	6	7	8	9	10
11	12	13	14 Ash Wednesday Valentine's Day	15	16	17
18	19 Family Day	20	21	22	23	24
25	26	27	28	29		

January 2024

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

March 2024

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						


Candice Kabloona

March | ᓚᐳ 2024

Baker Lake Harvest Study
ᖃᒪᓕᑐᐊᖏᑦ ᐊᖏᔪᓇᐅᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᓕᖅᖢᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒪᓂᖅ	Tuesday ᑐᐸᓯᐊᖅᓇᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᓴᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖃᐃᑐᖅᓇᖅ
February 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	April 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				1	2
3	4	5	6	7	8	9
10 Daylight Savings Time Starts	11	12	13	14	15	16
17 St. Patrick's Day	18	19 First Day of Spring	20	21	22	23
24	25	26	27	28	29 Good Friday	30
31 Easter Sunday						



Jamie Kataluk

April | ᐊᐃᓇᓕᓂ 2024

Baker Lake Harvest Study
ᖃᒪᓕᕐᒥᐊᖅ ᐊᖏᔪᓂᒃᓴᓕᒃ ᖃᐅᔨᓴᖅᓯᒪᔨᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᓚᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᖅᓇᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᓴᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖅᓇᖅ
	1 Easter Monday	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22 Earth Day	23	24	25	26	27
28	29	30				

March 2024

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

May 2024

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	



Winston Ookowt

May | ᒪᐃ 2024

Baker Lake Harvest Study
ᖃᐅᓂᑐᐊᖏᑦ ᐊᖏᔪᓇᓗᓂᖓᓂ ᖃᐅᔨᓴᖅᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᔪᓂᓴᖅ	Tuesday ᑐᐸᓯᐊᖅᓇᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᓴᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖅᓇᖅ
April 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	June 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		1	2	3	4
5	6	7	8	9	10	11
12 Mother's Day	13	14	15	16	17	18
19	20 Victoria Day	21	22	23	24	25
26	27	28	29	30	31	


Lars Qaqqaq

June | ᐊᑐ 2024

Baker Lake Harvest Study
ᖃᒪᓕᕐᒥᐊᖅ ᐊᖏᔪᓇᐃᓕᓴᐅᑉ ᖃᐅᔨᓴᓂᖅ

Sunday ᓴᓇᑕᓕ	Monday ᓴᓇᑕᓕᐅᒪᓕᓴᖅ	Tuesday ᑐᐸᔪᐊᖏᓇᖅ ᔪᑲᓕᖅ	Wednesday ᐱᖓᓱᐊᐊᑦ	Thursday ᔪᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖏᓇᖅ
May 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	July 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16 Father's Day	17	18	19	20	21	22
23	24	25	26	27	28	29
30						



Paul Kabloona

July | ᕿᓪᓕᐃ 2024

Baker Lake Harvest Study
ᖃᐅᓂᑐᐊᖏᑦ ᐊᖏᔪᓕᒃᓂᕐᒧᑦ ᖃᐅᔨᓴᖅᓂᖅ

Sunday ᓴᓇᕈᐃᓕᓂ	Monday ᓴᓇᕈᐃᓕᓂᐅᓚᓂᓴᖅ	Tuesday ᑐᐳᓯᐊᖏᓇᖅ ᓯᑲᓕᓂᖅ	Wednesday ᐱᖓᓱᐊᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᒥᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖏᓇᖅ
	1 Canada Day	2	3	4	5	6
7	8	9 Nunavut Day	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

June 2024

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

August 2024

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



Paul Kabloona

August | ᐊᔪᓂ 2024

Baker Lake Harvest Study
ᖃᒪᓕᒃᐊᖅᑎ ᐊᖏᔪᓇᖅᓯᓕᒫᑦ ᖃᐅᔨᓴᓕᖅᖢᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᓚᓕᖅᖢᖅ	Tuesday ᑐᐱᓂᐊᖏᓇᖅᑐᖅ ᓂᕆᓕᖅᖢᖅ	Wednesday ᐱᖏᓚᐊᑦ	Thursday ᓂᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓄᖏᐃᑐᖏᓇᖅᖢᖅ
July 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	September 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			1	2	3
4	5 Civic Holiday	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



Cheryl Cook

September | ᓯᑎᐱᓗ 2024

Baker Lake Harvest Study
ᖃᒪᓕᕐᕆᖏᑦ ᐊᖏᔪᓂᖅᓴᓕᒃ ᖃᐅᔨᓴᓂᖅ

Sunday ᓴᓇᕐᕆᓕ	Monday ᓴᓇᕐᕆᓕᐅᒪᓂᖅ	Tuesday ᑐᑭᓯᐊᖅᓯᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᒃᓴᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖅᓯᖅ
1	2 Labour Day	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22 First Day of Autumn	23	24	25	26	27	28
29	30 National Day for Truth and Reconciliation					

August 2024

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

October 2024

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



Paul Kabloona

October | ᐅᖅᑐᐱᓗ 2024

Baker Lake Harvest Study
ᖃᒪᓕᕐᕆᔨᖅ ᐊᖏᔪᓇᖅᓂᖏᓪᓗᑦ ᖃᐅᔨᓴᓂᓕᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒪᓂᖅ	Tuesday ᑐᖅᓯᐊᖅᓯᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᓚᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖅᓯᖅ
		1	2	3	4	5
6	7	8	9	10	11	12
13	14 Thanksgiving Day	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31 Halloween		

September 2024

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

November 2024

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30



Hosea Iksiraq

November | ᓄᕆᐱᐱᓗ 2024

Baker Lake Harvest Study
ᖃᐊᓕᑐᐊᖏᑦ ᐊᖏᔪᓇᒃᓴᓂᒍᑦ ᖃᐅᔨᓴᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒪᓂᓴᖅ	Tuesday ᑐᐳᓯᐊᖏᓇᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᓱᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖏᓇᖅ
October 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	December 2024 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31				1	2
3 Daylight Savings Time Ends	4	5	6	7	8	9
10	11 Remembrance Day	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30


Cheryl Cook

December | ᑎᓯᐱᓗ 2024

Baker Lake Harvest Study
ᖃᐊᓕᒃᐊᖏᑦ ᐊᖏᔪᓇᐃᓕᓴᒋᑦ ᖃᐅᔨᓴᓕᖅ

Sunday ᓴᓇᑕᐱᓕ	Monday ᓴᓇᑕᐱᓕᐅᓚᓂᓴᖅ	Tuesday ᑐᐳᓯᐊᖅᓇᖅ ᓯᑲᓕᖅ	Wednesday ᐱᖏᓴᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᐃᑐᖅᓇᖅ
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21 First day of Winter
22	23	24	25 Christmas Day	26 Boxing Day	27	28
29	30	31				

Please return the calendar to the Agnico-Eagle office for entry into the participant draw.

November 2024

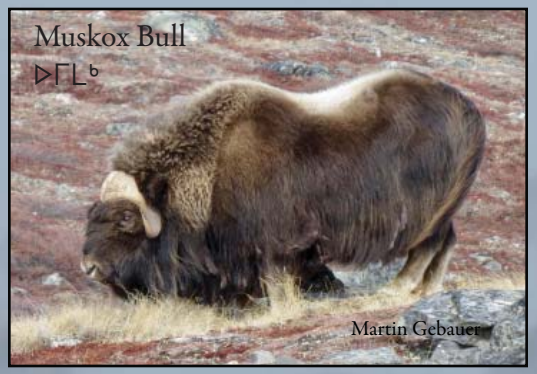
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

January 2025

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Wildlife and Fish Species of Interest











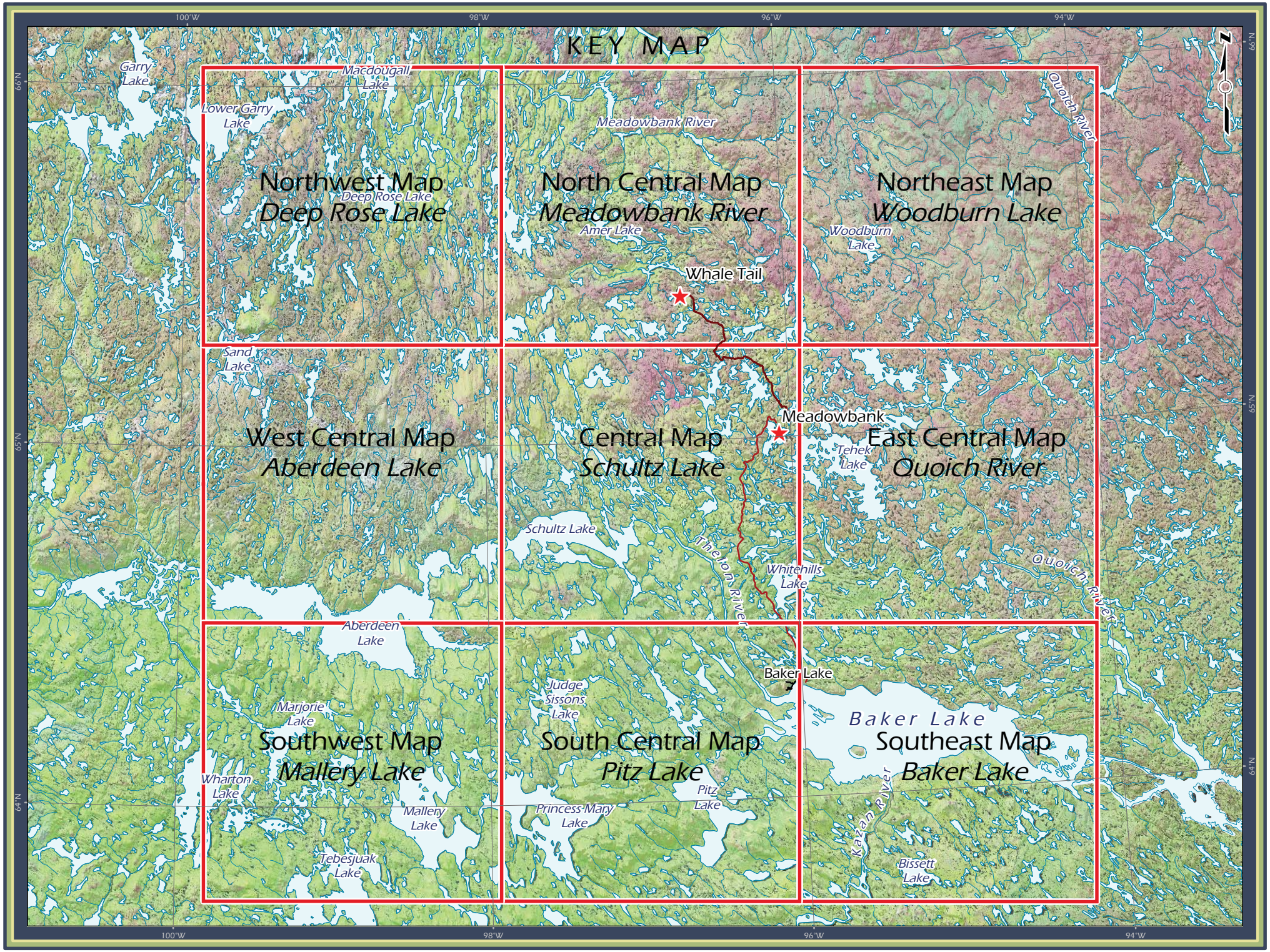








Martin Gebauer


KEY MAP
100°W
98°W
96°W
94°W
66°N
65°N
64°N
Garry Lake
Macdougall Lake
Lower Garry Lake
Meadowbank River
Quoich River
Northwest Map
Deep Rose Lake
Deep Rose Lake
North Central Map
Meadowbank River
Amer Lake
Northeast Map
Woodburn Lake
Woodburn Lake
Whale Tail
Sand Lake
West Central Map
Aberdeen Lake
Central Map
Schultz Lake
Meadowbank
Tehek Lake
East Central Map
Quoich River
Schultz Lake
Thelon River
Whitehills Lake
Quoich River
Aberdeen Lake
Baker Lake
Judge Sissons Lake
Marjorie Lake
Southwest Map
Mallery Lake
South Central Map
Pitz Lake
Baker Lake
Southeast Map
Baker Lake
Wharton Lake
Mallery Lake
Pitz Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
Bissett Lake

Baker Lake Harvest Study

Northwest Map
Deep Rose Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake



0 5 10 15
Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:
AGNICO-EAGLE

By:
Nunavut ENVIRONMENTAL CONSULTING LTD
CASLYS CONSULTING

99°30'W 99°W 98°30'W 98°W

66°N 65°45'N 65°30'N

ZE69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 ZE47

ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY

ZZ69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 ZZ47

Buliard Lake
Back River
Lower Garry Lake
Deep Rose Lake
ZP58

Baker Lake Harvest Study

West Central Map
Aberdeen Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake



0 5 10 15
Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:
AGNICO-EAGLE

By:
Nunavut ENVIRONMENTAL CONSULTING LTD
CASLYS CONSULTING

99°30'W 99°W 98°30'W 98°W
65°15'N 65°N 64°45'N 64°30'N

A69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 A47
B C D E F G H I J K L M N O P Q R S T U
V69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 V47

Sand Lake
Naujatuuq Lake
K58
River
Naujatuuq
Qumanaugaq Lake
Qumanaugaq Bay
Peqetuaz Hill
Kuaghok Narrows
Aberdeen Lake

Baker Lake Harvest Study

Southwest Map
Mallery Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake



0 5 10 15

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:

AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

99°30'W 99°W 98°30'W 98°W

64°30'N 64°15'N 64°N 63°45'N

V69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 V47

W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP

AQ69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 AQ47

Aberdeen Lake

Marjorie Hills

Dubawnt River

Marjorie Lake

AF58

Wharton Lake

Mallery Lake

Maniituq Hill

Tebesjuak Lake

Kunwak River

Piniarvik Peninsula

Baker Lake Harvest Study

North Central Map Meadowbank River

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake



0 5 10 15

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:

AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

97°30'W 97°W 96°30'W 96°W

66°N 65°45'N 65°30'N 65°15'N

ZE46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 ZE24

ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZO ZR ZS ZT ZU ZV ZW ZX ZY

ZZ46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 ZZ24

Back River

Meadowbank River

Amer Lake

Nanau Lake

ZP35

Whale Tail

N

Baker Lake Harvest Study

Central Map
Schultz Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake



0 5 10 15

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

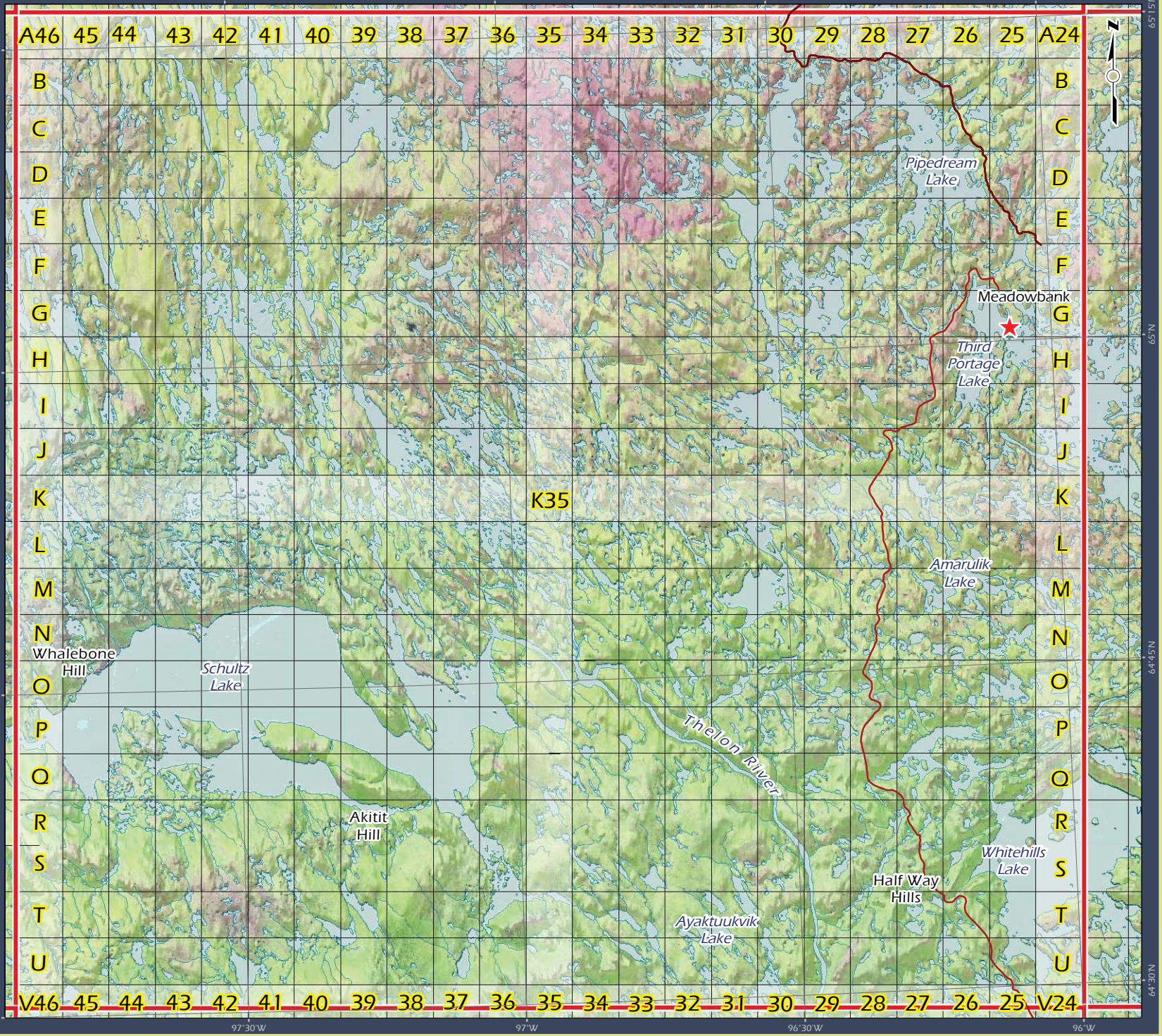
Prepared for:

AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING



Baker Lake Harvest Study

South Central Map
Pitz Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake



0 5 10 15

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:

AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

97°30'W 97°W 96°30'W 96°W

64°30'N 64°15'N 64°N 63°45'N

V46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 V24

W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP

AQ46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 AQ24

AF35

Thelon River

Qikittalik Lake

Sigalausivik Hill

Thom Lake

Baker Lake

Judge Sissons Lake

Iglujat Hills

Sagliq Island

Qamanaugaq Lake

Mihaluk Lake

Kingatnaaq Hill

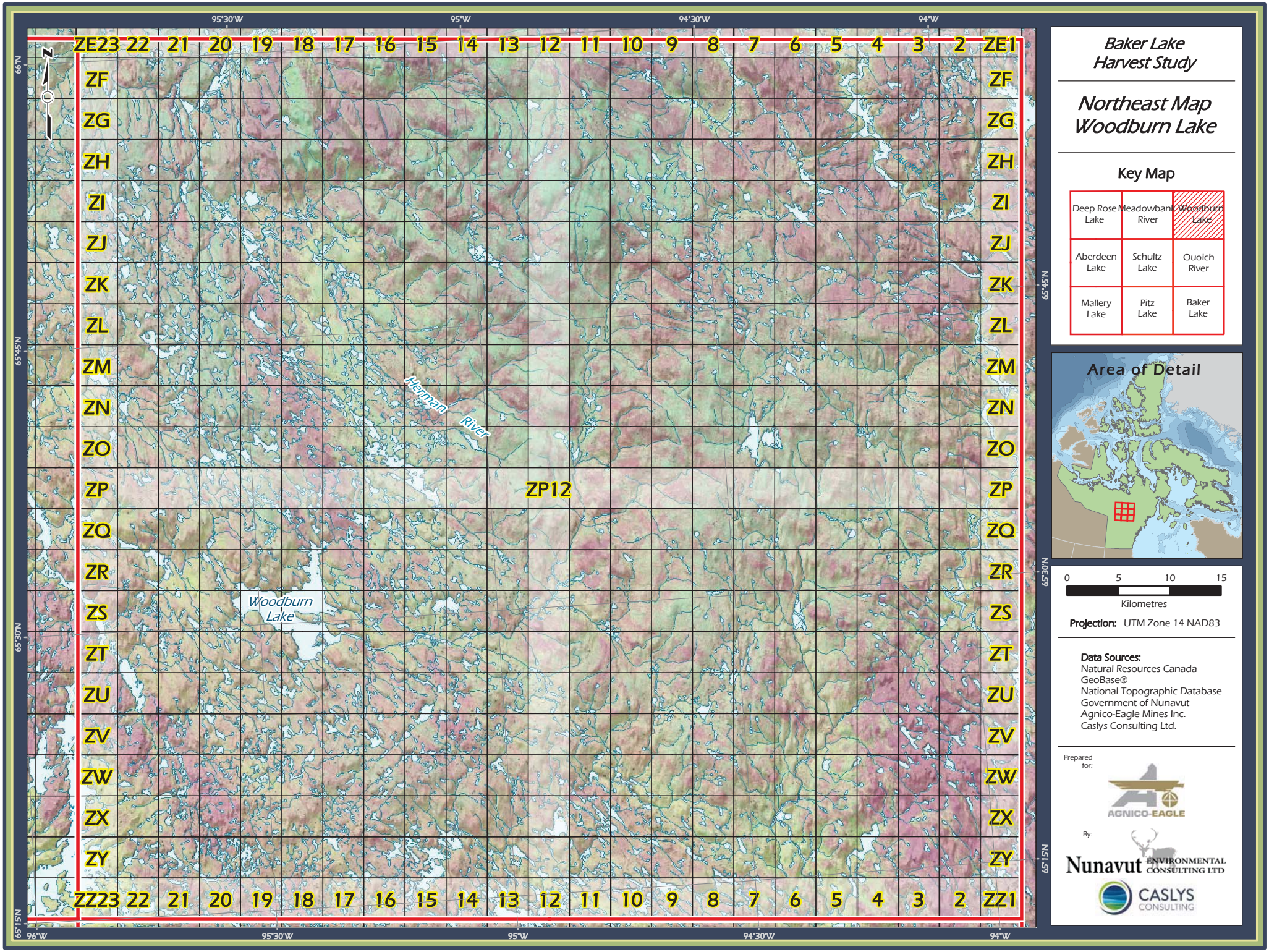
Paunraqtuuq Hill

Tiriksiujarvik Hill

Pitz Lake

Princess Mary Lake

Aumaluuktuuk Lake



Baker Lake Harvest Study

Northeast Map Woodburn Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake

0 5 10 15

Kilometres

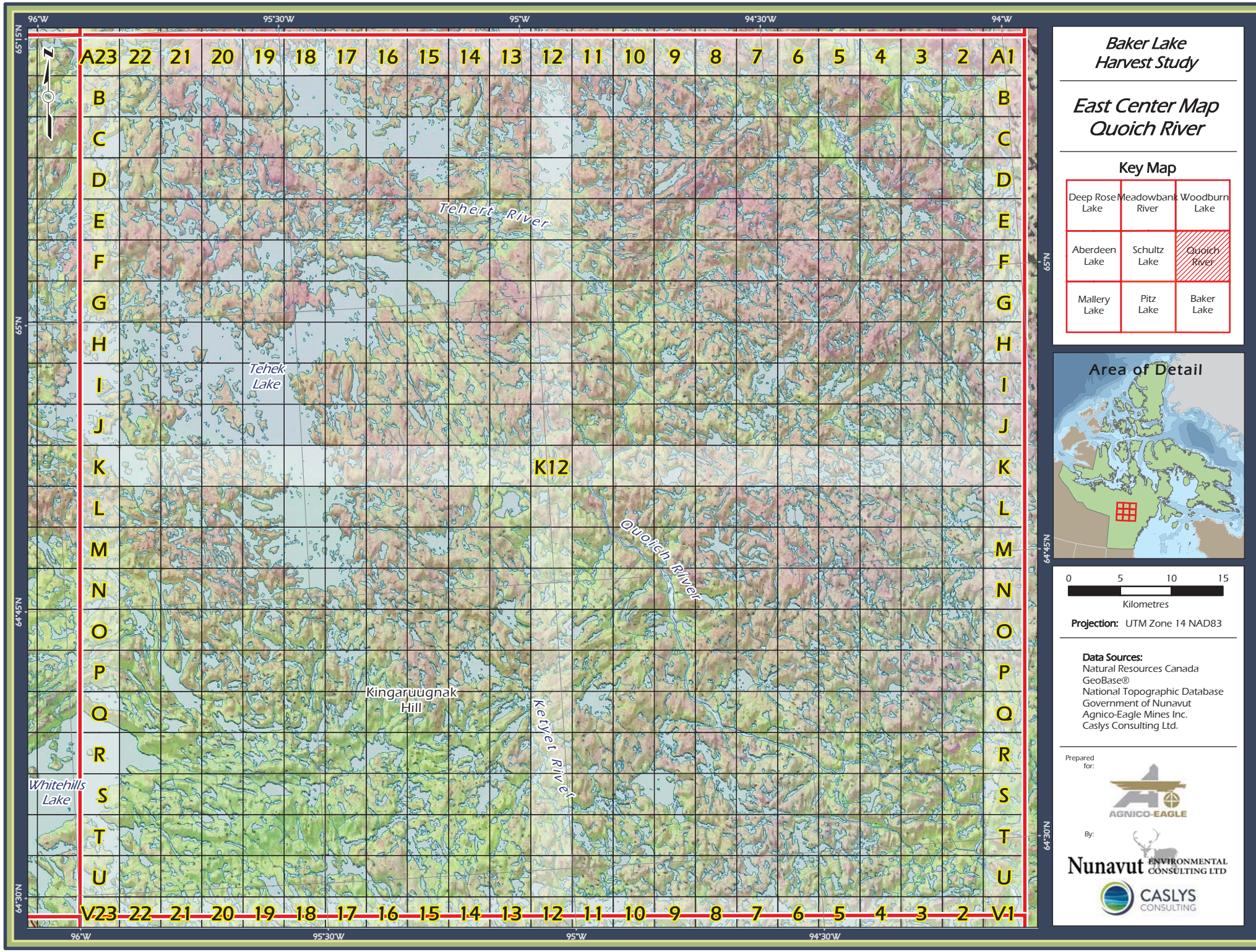
Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for: AGNICO-EAGLE

By: Nunavut Environmental Consulting Ltd

CASLYS CONSULTING



Baker Lake Harvest Study

East Center Map
Quoich River

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake

Area of Detail

0 5 10 15
Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for: AGNICO-EAGLE

By: Nunavut Environmental Consulting Ltd

CASLYS CONSULTING



Baker Lake Harvest Study

Southeast Map Baker Lake

Key Map

Deep Rose Lake	Meadowbank River	Woodburn Lake
Aberdeen Lake	Schultz Lake	Quoich River
Mallery Lake	Pitz Lake	Baker Lake

Area of Detail

0 5 10 15

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:

AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

How to Use the Baker Lake Harvest Calendar

Agnico Eagle Mines Ltd., in cooperation with the Baker Lake Hunters and Trappers Organization (HTO), want to understand hunting and fishing patterns by Baker Lake residents. Specifically, we want to understand how the Meadowbank and Whale Tail Gold Project, located north of Baker Lake, might change traditional harvesting patterns. To ensure that traditional hunting and fishing activities are not negatively affected, we have developed this calendar where participants can record harvest information throughout the year.

Near the back of the calendar is a page that shows the animal and fish species that are included in the study. Please write down the species, number, sex, and location of animals or fish that you have harvested on each date on the calendar. When writing down the location, please use the XY coordinate system provided on the nine maps at the back of the calendar.

For example, if you harvested a male caribou on January 16th on Big Hips Island you would write down "1 male caribou, AF19" in the January 16th square of the calendar.

You will also be visited or contacted by the hunter harvest coordinator occasionally throughout the year. The coordinator's job will be much easier if you write down your harvest information in the calendar as soon as possible.

Please return the calendar to the Agnico Eagle office in Baker Lake at the end of the year or give the calendar to the coordinator when he visits in January. Although each participant will receive a gift expressing our thanks, a draw will also be held in January for a number of high quality prizes.

If you have any questions., please contact the Baker Lake Harvest Study Consultant, Dylan White, at 1-266-500-4202 or dsgwhite@gmail.com. You can also contact an HTO member in the community or email Martin Gebauer at martin@gebauerassociates.com.

ᖃᓄᖅ ᐅᑦᓯᖏᓪᓗᑦ ᐊᑐᐃᓕᓴᖅᑦ

ᐊᒃᓱᑯ ᐃᔪ ᐅᕐᕋᖅᑕᓗᐊᑦ, ᐱᓕᓇᖅᑲᑎᖅᑳᓂᑕᒃ ᖃᑦᓚᓂᑎᑦᑎᓕᖅᑎᑦ ᐅᒪᔨᓕᓇᐊᓪᓚᑲᑯᓐᓂᑦ, ᑐᑭᓯᐊᓕᓂᑭᓚᔨᑦ ᒪᖃᑲᐃᓐᓂᔪᒥᑦ ᐊᑐᖅᑕᐅᖅᑲᖅᑕᖅᑐᑦ ᖃᑦᓚᓂᑐᐊᖃᑎᒃᓴᐅᓪᓕᑦ. ᐱᓕᐊᖅᑐᒥᑦ, ᖃᐅᐅᔨᒪᕐᓂᑦ ᖃᓄᖅ ᐊᐅᖅᑎᐅᓴᖅᑐᖅ ᐊᒪᒪᓗ Whale Tail ᔫᓕᒥᒃ ᐱᓕᓇᐊᖅ, ᐃᓂᐅᔨᒋᑐᖅ ᐅᐊᖏᓐᓇᖏᓂᑦ ᖃᑦᓚᓂᑐᐊᑦ, ᐊᓯᐊᖏᖅᑎᑦᑎᓐᓇᕐᓂᓚᖏᓐᓄᑦ ᐱᖅᑯᓯᓇᕐᐅᔨᒋᑦ ᒪᖃᑲᐃᓐᓇᖅᑐᖅ. ᐱᖅᑯᓯᓇᕐᐅᔨᒋᑦ ᒪᖃᑲᐃᖅᑎᑦᑎᓂᖅ ᐊᒪᒪᓗ ᐃᖅᑲᓕᐊᖅᑎᑦᑎᓂᐅᔨᑦ ᐱᐅᖏᑎᑐᒥᒃ ᐊᑐᖅᑕᐅᖅᑯᓐᓂᑦ, ᐊᑲᖅᑭᔪᓕᐅᖅᑐᒐᑦ ᐅᑦᓯᖏᓪᓗᑎᒃ ᐃᓕᐅᖅᑕᐅᖅᑯᔨᑦ ᑎᑎᕋᐅᓕᖅᓯᓂᐊᖅᑕᖏᓐᓄᓕᖅᑕᖏᓐᓂᒃ ᒪᖃᑲᐃᑕᖏᓪᓗᑦ ᑐᑭᓯᐊᓕᖅᑐᒐᑦ ᑐᑭᓯᐊᓕᖅᑐᖅᑐ

Produced By:



AGNICO EAGLE



Nunavut ENVIRONMENTAL CONSULTING LTD

and



CASLYS CONSULTING

APPENDIX G

Arctic Raptors Report



Prepared For:
Marie-Pier Marcil
Environmental Project Coordinator
marie-pier.marcil@agnicoeagle.com
Agnico Eagle Mines Limited
Meadowbank Complex
Suite 540
Baker Lake, Nunavut
X0C 0A0

Prepared By:
Arctic Raptors Inc.
170 52260 RR223
Sherwood Park, Alberta
T8C 1J3

Contact:
Alastair Franke PhD
alastair.franke@ualberta.ca

Background

Broad scale monitoring of raptors in the vicinity of the Meadowbank Mine including the Whale Tail site (Meadowbank Complex) was first initiated in 2015. The purpose of the monitoring program from 2015 through 2019 focused on searching for nesting sites located near to, and far from proposed or existing infrastructure. In 2018, the Government of Nunavut (GN) indicated that monitoring to that point did not have the power to detect and mitigate Project-related effects on raptor nesting success. In addition, the GN argued that the study design did support analysis that would allow detection of project-related nest failures (e.g., by examining nest success as a function of intensity of project-related disturbance). Starting in 2021 (no monitoring was completed in 2020 due pandemic restrictions), Agnico Eagle conducted two broad-scale helicopter surveys per year with the intent of estimating project effects. In addition, Agnico Eagle has conducted regular monitoring of project-related infrastructure considered to be typical of nesting habitat (e.g., road-side quarries).

Monitoring objectives are outlined in the Agnico Eagle Meadowbank Division Terrestrial Ecosystem Management Plan (TEMP; Agnico Eagle Mine 2019). The TEMP outlines requirements for avoiding and managing disturbance to nesting raptors, as follows:

- Develop a nest-specific response plan for identified raptor nests within areas of concern to ensure that nesting success is not affected by development activities
- Follow GN-DoE guidelines for avoiding disturbance to raptor nests
- Active nest monitoring

In addition, the TEMP also outlines the general monitoring approach, as follows:

- Document and map raptor nesting sites (see Project Certificate No. 008 Condition 33)
- Evaluate the success of mitigation to prevent disturbance to raptors or raptor nests
- Estimate project-related disturbance effects
- Develop site-specific management plans for nesting sites within 1.5km of project infrastructure, including minimum “no disturbance” buffers
- In the event of deterrence or removal of a nest, Agnico Eagle must contact the Government of Nunavut (GN) and secure the required permits (see Project Certificate No. 008 Condition 36)

Species Descriptions

Peregrine Falcon (*Falco peregrinus tundrius*)

The Arctic peregrine falcon (Figure 1) is medium- to large-sized falcon. It has a dark hood and face with distinct dark malar stripe, cream to white throat, slate-grey back, barred belly, legs, and tail. Long pointed wings, stocky body. Plumage of immature birds brown rather than grey, and the breast is streaked rather than barred. In adults, the cere and orbital ring are yellow, and bluish in immature birds. Compared with gyrfalcons, the peregrine is smaller and less stocky. In flight, the wings of peregrines appear narrower and more pointed. In peregrine falcons, wing tips extend to bottom of the tail when perched, while in gyrfalcons, wing tips extend two-thirds down the length of tail.

F. p. tundrius breeds mainly north of the treeline from Alaska east throughout northern Canada to Greenland. It breeds throughout the taiga and tundra wherever suitable nesting habitat and sufficient prey are present. In Nunavut, peregrines appear to have their highest densities in the Kivalliq and

Kitikmeot regions. Highest breeding density on record is on the western shores of Hudson Bay in the Kivalliq Region.



Figure 1 Peregrine Falcon (male)

F. p. tundrius is a long-distance migrant, wintering mainly throughout South and Central America, but also in southern United States and Mexico. Northern-breeding American and Arctic peregrines are highly migratory (Yates et al. 1988, Schmutz et al. 1991, Fuller et al. 1998), and although fall migration occurs over a broad geographic range (Fuller et al. 1998), Yates et al. (1988) indicated that "separate and distinct autumn migratory populations pass through the east and Gulf coasts" of the United States.

Peregrine falcons usually nests on cliffs and rocky outcrops, but also nest on hilltops, river canyons, rock screes, and on occasion directly on the ground (Court et al. 1988, Ratcliffe 1993). They prefer nesting in locations close to water in south-facing, rugged terrain. Hunting habitat includes rugged coastline areas and rolling tundra that consists of raised beaches, dry tundra, sedge meadows, wetlands, and lakes that are inhabited by a diversity of breeding songbirds and shorebirds.

Peregrine Falcons do not build a nest but make a depression (called a scrape) in the substrate on a cliff ledge. Scrapes are usually approximately 20 cm in diameter and 4 cm deep. Females usually do the majority of incubation and brooding of small young. Males provision incubating females and provide most of the prey when nestlings are small. Thereafter, females do most of the feeding, beginning to hunt after young are large enough to thermoregulate on their own. Clutch size is typically 3 or 4 eggs in Nunavut. In Rankin Inlet and Igloolik, the median incubation period of the first egg was 36 days and decreased 1 day for each additional egg. The incubation period of the 4^{th} egg (33 days) was similar to what has been reported elsewhere (Burnham 1983).

The Arctic peregrine falcon is a generalist predator with a diverse diet that includes passerines, shorebirds, ducks , gulls, terns, jaegers, black guillemots, and, when available, collared lemmings, brown lemmings, and Arctic ground squirrels. Bradley and Oliphant (1991) indicated that, around Rankin Inlet, small birds (64% of prey items) represented the greatest portion of prey items, followed by microtine rodents (25%), large birds (8%), and Arctic ground squirrels (4%). The most important prey measured by percent biomass were large birds (43%), followed by small birds (25%), microtine rodents (18%), and Arctic ground squirrels (15%).

In Nunavut, the earliest documented arrival for Peregrine Falcons is 10 May at a known breeding site near Rankin Inlet. Although arrival timing varies with spring conditions, most sites are occupied during the 3rd week of May. Median laying date in Rankin Inlet (9 June) is typically earlier than Igloolik (15 June) and northern Baffin Island (16 June). Median date of hatching ranges from 14 July at Rankin Inlet to 18 July on northern Baffin Island and 20 July at Igloolik (Jaffre et al. 2015). Birds depart the breeding grounds from mid-September through early October, arriving on the wintering grounds throughout Central and South America in November.

The peregrine falcon is no longer included on the list of endangered and threatened species in Canada (SARA 2002, as amended); furthermore North American populations including those monitored in Nunavut are considered to be stable (Franke 2016, Franke et al. 2020).

Gyrfalcon (*Falco rusticolus*)

The gyrfalcon (Figure 2) is large with pointed wings, but more rounded and broader than the wings of other falcon species. The tail is relatively long. When perched, wings extend 2/3 down the tail. The body is thick and powerful, particularly in females. Adults have yellow ceres, eye-rings and legs. As in all falcons, the eyes appear black. Three main color morphs occur: black, grey and white. White adults have almost pure white breasts and bellies, with dark wingtips (dipped-in-ink appearance). Grey adults have slate-colored back, with white underparts mottled with gray arrowhead-shaped markings. Dark adults are dark grey overall above and dark-streaked breasts and belly. There is extreme reverse sex dimorphism, with males being approximately 2/3 the size of females (Ferguson-Lees et al. 2001).

Gyrfalcons distribution extends throughout the circumpolar Arctic. Most of the breeding range occurs north of 60°N, but breeding pairs are known to exist as far south as 55°N, mainly along seacoasts in eastern Canada. Many adults remain within the breeding range throughout the year, but some disperse southwards in winter, small numbers reaching the norther United States (Cade 1982, Poole 1987). Immature birds are much more likely to winter to south of breeding range, and females are thought to disperse more widely, with many males remaining relatively close to breeding territories throughout the year.

Ptarmigan are often cited as the most important prey species by biomass, but Arctic ground squirrel and Arctic hare are also important, as well as small mammals (mice and voles) and other birds (ducks, sparrows, buntings). In central Nunavut, Poole and Boag (1988) identified eleven species of birds and five species of mammals among the prey. Birds accounted for three quarters of the diet, and adult rock ptarmigan were the most common. Arctic ground squirrel and arctic hare made up the bulk of mammalian prey.

Males occupy and defend nesting territories as early as the end of January, with females arriving in mid-March. In Nunavut, laying typically begin in the first week of May with most pairs laying by the end of the second week in May. Nestlings typically hatch in mid-June, but hatching can occur throughout June. Nestlings fledge in late July or early August after 7 weeks in the nest. In Nunavut, gyrfalcon usually nest

on cliff ledges, ideally beneath sheltering overhang; sometimes nests in trees or on man-made structures. Nests are generally on rock ledges or abandoned rough-legged hawk or common raven nests. Use of alternate nest sites is not uncommon. Pairs do not necessarily attempt breeding every year, depending on food supply. Typical clutch size is 3-4 eggs (Booms et al. 2008) that are incubated for 34-36 days mostly by the female (ca. 80%). The North American population including Nunavut is considered to be stable (Clum and Cade 1994, Kirk and Hyslop 1998). Although low spring temperatures are associated with later arrival at nesting territories in Nunavut (Poole and Bromley 1988), there was no effect on laying dates. However, (Poole and Bromley 1988) indicated that increased spring precipitation (snow) reduced reproductive success.



Figure 2. Gyrfalcon (female)

Rough-legged Hawk (*Buteo lagopus)*

The rough-legged hawk (Figure 3) is a medium-large bird of prey, with a small beak, predominantly brown in colour and often mottled. Plumage is highly variable with recognized light and dark morphs. Extensive field experience is required to distinguish between males and females, and between adults and juveniles based on plumage alone. A broad chest band is evident in most plumage variations, and in flight, a dark carpal patch is characteristic in light morph individuals. One or more dark terminal bands appear on the tail. The wing tips are long enough to reach or extend past the tail when the animal is perched. Legs are feathered to feet (Ferguson-Lees et al. 2005).

Widespread throughout North America, breeding from the Aleutian Islands, the interior of Alaska, Yukon, northern Mackenzie, and across Nunavut to northern Labrador and Newfoundland and south to Manitoba and southeastern Quebec. In Nunavut, rough-legged hawks are present over most of the territory except for islands without lemmings (Bechard and Swem 2002).

Regularly hovers, or “kites” while facing into the wind scanning for prey. Soars with wings raised in a slight dihedral (V-shape). It is a diurnal raptor that still-hunts from prominent perching structure on both breeding and wintering grounds. Prey is captured on the ground. Courtship involves soaring and calling, with the male engaged in a flight display of repeated undulating stoops rising upward to mid-air stall. It is gregarious on migration, often travelling in flocks, but small groups or individuals are not uncommon.

Breeding pairs prefer rugged terrain areas with steeper slopes in areas associated with vegetation, and were most likely to nest in large, productive valleys surrounded by high-elevation plateaus (Galipeau et al. 2016). It is widely distributed in winter, usually found in open habitat such as prairies, plains, coastal marshes, agricultural fields, and airports (Johnsgard and Johnsgard 1990). More common in wintering areas with short growing seasons and low precipitation, with highest densities in the northern United States, Great Basin area, and the western shortgrass prairies (Bock and Lepthien 1976, Bock et al. 1977).

The rough-legged hawk is a small mammal specialist; thus, its breeding activity is generally associated with local abundance of ground squirrels, voles, or lemmings (Hanski 1991, Potapov 1997). It will prey on birds when small mammals are scarce, particularly juvenile passerines and shorebirds, and will resort to consuming carrion (Watson 1986). Usually reproductively mature at 2 years of age. Stick-nests are built soon after arrival on territory, typically on cliffs, bluffs, or on the ground. Clutch size varies (1-7 eggs), depending on food availability, but 3-5 eggs are usual and laid in May. Incubation 31-33 days, provided almost entirely by the female. Nestling period is 35-40 days, and fledglings remain dependent on adults for another 2 weeks. The male provisions the young and the female feeds the young. Pairs show nest site fidelity, and in locations where ground squirrels are entirely absent, they may forgo breeding or have small broods when lemmings are low (Bechard and Swem 2002). Bechard and Swem (2002) indicated that egg-laying date was associated with spring temperatures and snow-free ledges, but Potapov (1997) reported no effect of snow melting date or spring/summer temperatures on number of nesting pairs.



Figure 3. Rough-legged Hawk (male)

Methods

Field Surveys

Structured surveys were conducted from 2015 – 2017, 2019 and 2021-2024 (Table 1). The focus of these surveys was to search known nesting sites for the presence of cliff-nesting raptors. In addition to the structured surveys, favorable habitat was searched opportunistically when ferrying between known sites, camps, or other mine infrastructure and when raptors or signs of site use (e.g., whitewash, orange-colored lichen, and unused nests) were observed. Sites were considered occupied if one or more adults displayed territorial or reproductive behavior (e.g., vocalization and/or flight behavior associated with defense of breeding territory or presence of nest building, nest, or eggs). Locations with partially-built or unused nests without detection of breeding aged adults were noted as such (e.g., old stick nest; no birds detected). Raptor monitoring in 2024 involved two helicopter surveys (22 May – 26 May, 07 – 10 August), and ground monitoring of potential nesting habitat (natural cliffs, quarries and borrow pits) along the Whale Tail Haul Road (WTHR; Meadowbank to Whale Tail) and All-Weather Access Road (AWAR; Baker Lake to Meadowbank).

Table 1. Broad scale survey effort from 2015-2024 for raptors breeding in the vicinity of the Meadowbank Complex.

Year	2015		2016		2017		2018		2019		2020		2021		2022		2023		2024	
Survey	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Start	28/05	—	18/05	21/07	28/05	—	—	—	13/06	—	—	—	23/05	04/08	28/05	12/08	23/05	09/08	22/05	07/08
End	30/05	—	20/05	23/07	30/05	—	—	—	15/06	—	—	—	30/05	08/08	03/06	17/08	28/05	12/08	26/05	10/08
Hours	12	—	10	10	12	—	—	—	10	—	—	—	12	12	11.7	12.4	10.7	11.4	12.8	12.9

Mapping

Shapefiles for the most recent projection of the combined footprint of the AWAR, WTHR, and project site were read into R using the `readOGR` function in the `rddal` package and converted to a data frame for `ggplot2` using the `fortify` function. The spatial extent for the mapping exercise was set using the `get_map` function in the `ggmap` package. Maps portraying species-specific nesting sites were plotted using `ggmap`.

Data Analysis

Distance to disturbance

Spatial objects (lines and polygons) describing the project footprint were acquired from Agnico Eagle. Euclidean distances from nesting sites to the nearest spatial object were calculated in R (R Development Core Team 2019) using the `sp`, `rgeos`, and `geosphere` packages.

Occupancy

Although estimation of nesting site occupancy can serve as a metric of population status (MacKenzie et al. 2002, 2003), detection of nesting pairs is imperfect, and estimating the proportion of occupied sites without accounting for detection error can lead to underestimation of true occupancy (Kéry and Schmidt 2008). Occupancy modeling estimates parameters that influence occupancy, and simultaneously accounts for imperfect detection (Marsh and Trenham 2008). In any given year, the status of a nesting site is limited to one of only two outcomes: occupied or not occupied. Occupancy modelling estimates the following parameters:

1. initial colonization – the probability that a nesting site is occupied in the first survey year (ψ),
2. colonization – the probability that an unoccupied site becomes occupied between years (ε),
3. extinction – the probability that an occupied site becomes unoccupied between years (γ); and,
4. detection – the probability that birds are detected given that the nesting site is occupied (*p*).

Nesting site survival is estimated as the reciprocal of extinction (i.e., the probability an occupied site remains occupied between years; 1-γ). In addition, environmental covariates can be added to an occupancy model to test whether they influence the above parameters using a logit link function. Multi-year occupancy was calculated in R (R Development Core Team 2019) using the 'unmarked' package. When appropriate, data were standardized (e.g., distance to disturbance was standardized by subtracting the mean from each distance value and dividing by the standard deviation), and then formatted specifically for 'unmarked' using the *unmarkedMultFrame* function.

Occupancy among years was analyzed separately for peregrine falcons, rough-legged hawks, and gyrfalcons. To do so, the total number of nesting sites was filtered to include only those nesting sites that were occupied at least once between 2015 and 2024 for each species. Model fitting of candidate models (Table 2) was performed using the *colext* function. Akaike Information Criterion (AIC) was used for model selection.

Three candidate models were selected *a priori* to estimate the effect anthropogenic disturbance or time (Table 2) when contrasted against the null model. The aim of this analysis was two-fold: 1) to estimate the proportion of occupied nesting sites annually, and; 2) to estimate the trend in nesting site occupancy from 2015 to 2024. Trend in occupancy was estimated using annual occupancy probabilities to calculate average rate of change (λ) at the population level (MacKenzie et al. 2003) where a value <1 indicates population decline and >1 indicates an increase. Initial occupancy and detection probability were set to constant (i.e., 1) time varying (i.e., year), respectively, for all models. Model structure for extinction and colonization varied according to the test for effects (see Table 2).

Table 2. Candidate models

Model structure	Model #	Tests for effect of:
ψ(1) + ε(1) + γ(1) + *p*(year)	m0	Null (contrast to m1 and m2)
ψ(1) + ε(d2d) + γ(d2d) + *p*(year)	m1	Distance to disturbance (project infrastructure)
ψ(1) + ε(year) + γ(year) + *p*(year)	m2	Time (captures effect of missing covariates)

Reproductive success

Over the course of the ten-year period, five surveys were conducted during brood rearing (2016, and 2021 -2024). For this report, estimates of reproductive success are reported as the number of young hatched

from a single nesting attempt by a pair of birds, regardless of age at the time they were observed. Because nestling age varied considerably between years and among sites, measures of annual productivity *per se* are expected to be biased high. All nesting sites were assumed to be contained within a unique nesting territory (i.e., no nesting territories were occupied by more than one pair of birds of the same species, regardless of the potential for alternative nesting sites within nesting territories).

Results

Mapping

Among survey years (see Table 1), 163 locations considered to be typical of raptor nesting habitat were surveyed at least once from 2015 – 2017, 2019, and 2021 - 2024. Of the 163 locations surveyed (Figure 4), nesting raptors have been detected at 107 nesting sites (Table 13). Peregrine falcons have been documented at 88 nesting sites, rough-legged hawks at 35 nesting sites and gyrfalcons have been documented at 18 nesting sites.

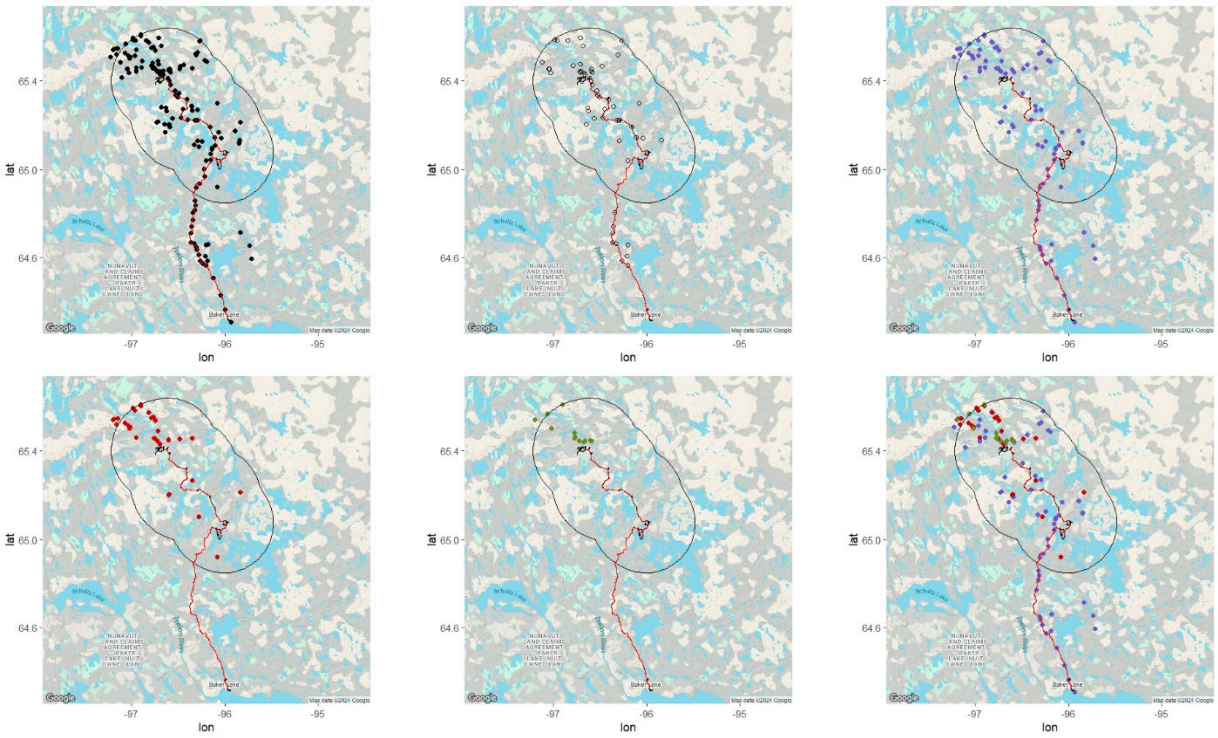


Figure 4. All cliffs surveyed (n=163 top L), cliffs with no record of occupancy (n= 58; top C), PEFA nesting sites (n = 88; top R), RLHA nesting sites (n=35; bottom L), GYRF nesting sites (n=18; bottom C), and all recorded nesting sites combined (bottom R) for the period 2015 – 2024 in the vicinity of the Meadowbank Complex

Distance to Disturbance

Mean distance from known occupied nesting sites to project infrastructure was 8.59 km (SD=8.04 km, range = 0 – 25.42 km). Twenty-two nesting sites fell within 1.5 km of the footprint of AWAR Road, Whale Tail Haul Road, or MBK Complex and are considered candidates for development of a site-specific management plans. Eighteen of the 22 nesting within 1.5 km of the footprint were less than or equal to 600 m from the footprint (500m baseline setback, plus additional 100m setback during the breeding season), identified by the Government of British Columbia (2013) for species with moderate ability to co-

exist with human activity. Twenty-one of the 22 nesting sites within 1.5 km of the footprint have been occupied by peregrine falcons, 17 of which were in rock quarries that were excavated for road building and maintenance, and four were located on natural cliffs. Two rough-legged hawk nesting sites were located within 1.5 km of the project footprint, and were located on natural cliffs. One gyrfalcon nesting site was detected within 600 m of the project footprint in a roadside quarry.

Occupancy

Peregrine Falcons

The minimum and maximum number of nesting sites sampled in any year was 16 (2018) and 88 (2022 and 2024), respectively (Table 3). The minimum and maximum number of breeding pairs detected was 8 (2020) and 41 (2024), respectively (Table 3). The top occupancy model (i.e., m1) included colonization and extinction effects of distance to disturbance, and a year effect for detection (Table 4; see Table 5 for parameter estimates). Delta AIC for the second-ranked model (m0, the null model) compared to m1 was 3.33 (i.e., >2.0), suggesting that effect size associated with distance to disturbance was important (Table 4). In this regard, the relationship between distance to disturbance and the probability that an unoccupied site would become occupied was negative (i.e., unoccupied nesting sites closer to the project footprint had a higher probability of becoming occupied when contrasted with those further from the project; Figure 5). Similarly, occupied nesting sites closer to the project footprint had a lower probability of becoming unoccupied when contrasted with those further away (Figure 5). Using m1, trend in occupancy (Figure 6) was $\lambda = 0.99$ (SE=0.04).

Table 3. Count of peregrine falcon nesting sites sampled, detected, colonized, extinct, static, and common from 2015 – 2024 for birds breeding in the vicinity of the Meadowbank Complex.

year	sampled	detected	colonized	extinct	static	common
2015	65	29	NA	NA	NA	NA
2016	68	32	8	9	44	61
2017	77	31	4	9	55	68
2018	16	9	2	3	11	16
2019	77	28	1	5	10	16
2020	17	8	4	2	11	17
2021	81	25	3	2	12	17
2022	88	36	19	10	52	81
2023	87	32	16	20	51	87
2024	88	41	22	14	51	87

Table 4. Model selection based on AIC score for peregrine falcons

Model structure	Model #	Parameters	AIC score	delta AIC	AICwt	Cumltvwt
-.d2d.d2d.year	m1	15	1228.85	0	0.84	0.84
-.-.-.year	m0	13	1232.18	3.33	0.16	1
-.year.year.year	m2	29	1241.46	12.60	1.5E-03	1

Table 5. Parameter estimates (null model; log odds scale) for peregrine falcon initial occupancy (psi), colonization (gamma) and extinction (epsilon), and a year effect for detection (rho).

	psi(Int)	col(Int)	col(d2d)	ext(Int)	ext(d2d)	p(Int)	p(2016)	p(2017)	p(2018)	p(2019)	p(2020)	p(2021)	p(2022)	p(2023)	p(2024)
estimate	0.38	-1.02	-0.29	-0.72	0.18	0.62	1.04	8.90	1.34	1.52	1.96	-0.45	0.23	-0.89	0.09
SE	0.43	0.15	0.15	0.18	0.15	0.57	0.678	32.26	0.97	1.22	1.24	0.68	0.66	0.63	0.64

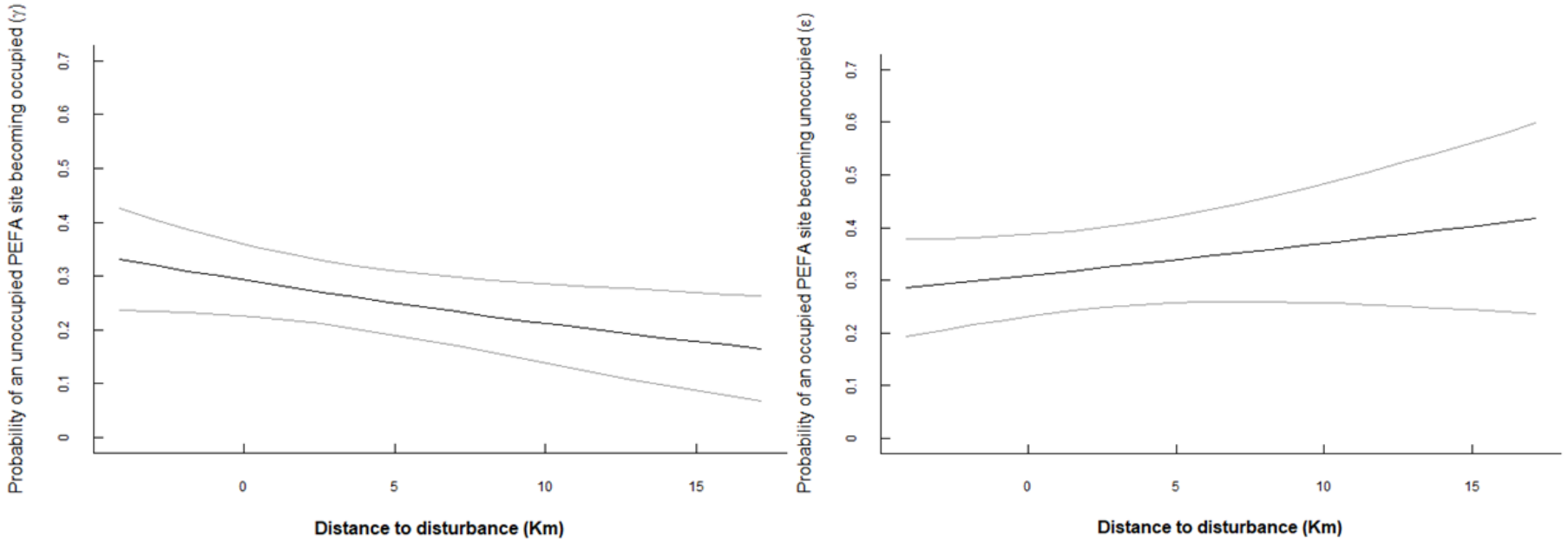


Figure 5. The effect of distance to disturbance on the probability that an unoccupied site would become occupied (L), and the effect of distance to disturbance on the probability that an occupied site would become unoccupied (R)).

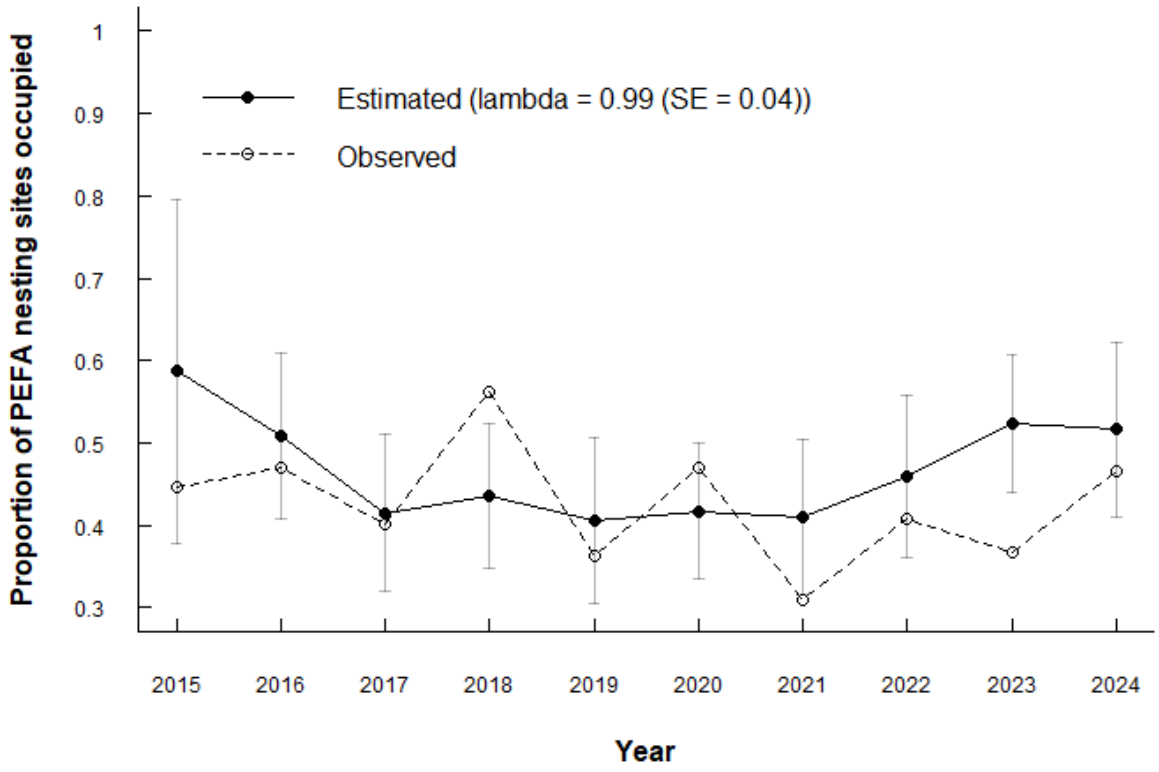


Figure 6. Proportion of PEFA nesting sites occupied from 2015 – 2024 in the vicinity of the Meadowbank Complex. The proportion observed (open circles with dashed lines) are point estimates, and do not account for detection error. The proportion estimated (closed circles with solid lines) accounts for detection error and includes standard error bars. Lambda = 0.99±0.04

Rough-legged Hawks

The null model was ranked first among the candidates for rough-legged hawk occupancy (Table 6; see Table 7 for parameter estimates). Trend in occupancy (Figure 7) calculated as average rate of change at the population level was λ = 1.06 (SE=0.13), where a value <1 indicates population decline and >1 indicates an increase (MacKenzie et al. 2003).

Table 6. Model selection based on AIC score for rough-legged hawks.

Model structure	Model #	Parameters	AIC score	delta AIC	AICwt	Cumltvwt
-.-.-.year	m0	13	400.51	0	0.87	0.87
-.d2d.d2d.year	m1	15	404.38	3.86	0.13	1.00
-.year.year.year	m2	29	424.96	24.44	0.00	1.00

Table 7. Parameter estimates (null model; log odds scale) for rough-legged hawk initial occupancy (psi) colonization (gamma) and extinction (epsilon), and a year effect for detection (rho).

	psi(Int)	col(Int)	ext(Int)	p(Int)	p(2016)	p(2017)	p(2018)	p(2019)	p(2020)	p(2021)	p(2022)	p(2023)	p(2024)
estimate	-0.60	-0.81	-0.54	-0.01	0.77	9.68	0.00	-0.16	0.00	-0.24	-0.36	-1.17	-1.03
SE	1.58	0.36	0.38	2.16	2.06	85.12	100.42	2.39	100.42	2.33	2.35	2.34	2.33

The minimum and maximum number of nesting site sampled in any year was 0 (2018 and 2020) and 35 (2022, 2023 and 2024), respectively (Table 8). The minimum and maximum number of breeding pairs detected was 0 (2018 and 2020) and 16 (2017), respectively (Table 8).

Table 8. Count of rough-legged hawk nesting sites sampled, detected, colonized, extinct, static, and common from 2015 - 2024 for birds breeding in the vicinity of the Meadowbank Complex.

year	sampled	detected	colonized	extinct	static	common
2015	24	4	NA	NA	NA	NA
2016	31	12	5	1	16	22
2017	32	16	6	4	18	28
2018	0	0	0	0	0	0
2019	33	7	0	0	0	0
2020	0	0	0	0	0	0
2021	34	10	0	0	0	0
2022	35	9	5	7	20	32
2023	35	6	3	6	24	33
2024	35	7	4	3	28	35

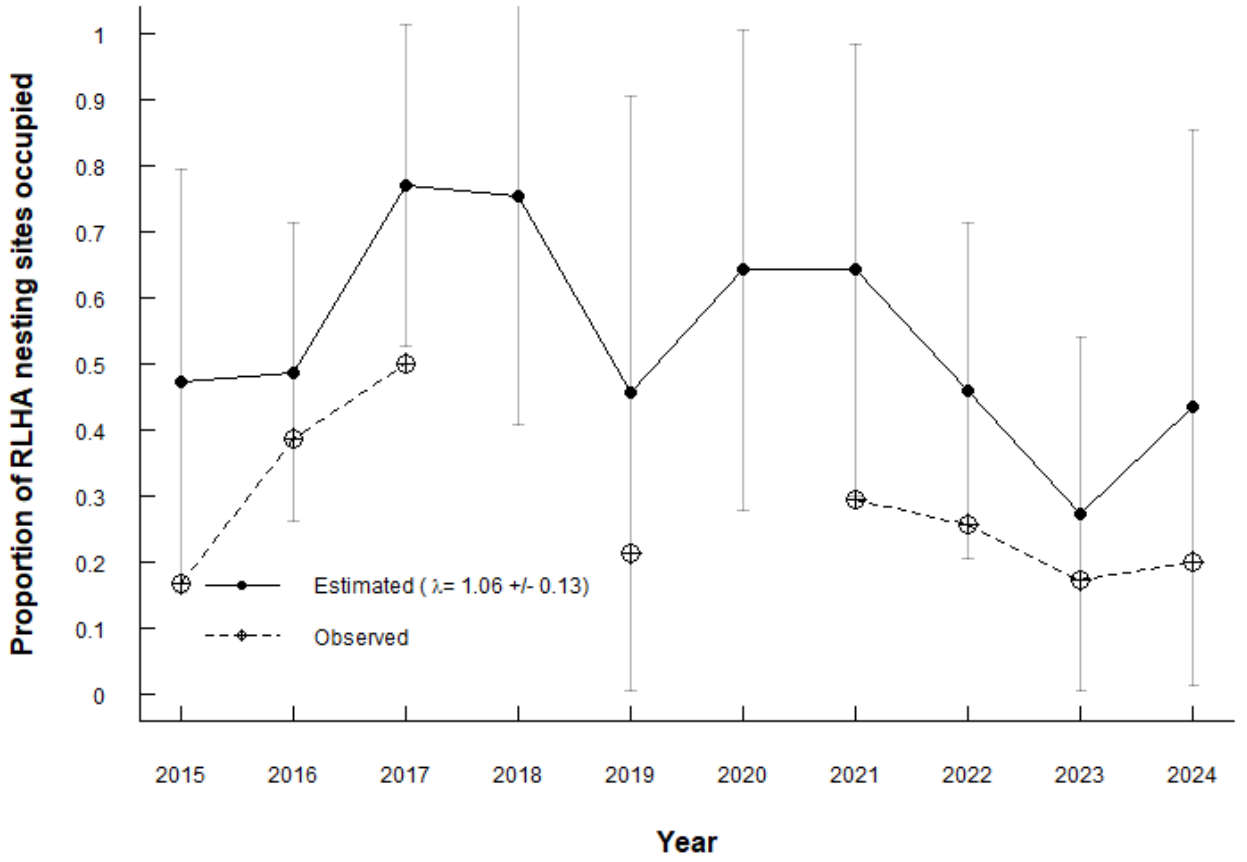


Figure 7. Proportion of RLHA nesting sites occupied from 2015 – 2024 in the vicinity of the Meadowbank Complex. The proportion observed (open circles with dashed lines) are point estimates without error bars, and do not account for detection error. The proportion estimated (closed circles with solid lines) accounts for detection error and includes standard error bars. Lambda = 1.06±0.13

Gyrfalcons

The null model was ranked first among the candidates for gyrfalcon occupancy (Table 9; see Table 10 for parameter estimates). Using the null model, trend in occupancy (Figure 8) calculated as average rate of change at the population level was λ 0.98 (SE=0.07), where a value <1 indicates population decline and >1 indicates an increase (MacKenzie et al. 2003). The minimum and maximum number of nesting site sampled in any year was 1 (2018 and 2020) and 18 (2022, 2023 and 2024), respectively (Table 11). The minimum and maximum number of breeding pairs detected was 0 (2018 and 2020) and 6 (2024), respectively (Table 11).

Table 9. Model selection based on AIC score for gyrfalcons.

Model structure	Model #	Parameters	AIC score	delta AIC	AICwt	Cumltvwt
-.-.-.year	m0	13	209.20	0.00	0.84	0.84
-.d2d.d2d.year	m1	15	212.57	3.38	0.16	1.00
-.year.year.year	m2	29	229.86	20.66	0.00	1.00

Table 10. Parameter estimates (null model; log odds scale) for gyrfalcon initial occupancy (psi) colonization (gamma) and extinction (epsilon), and a year effect for detection (rho).

	psi(Int)	col(Int)	ext(Int)	p(Int)	p(2016)	p(2017)	p(2018)	p(2019)	p(2020)	p2021)	p(2022)	p(2023)	p(2024)
estimate	-0.94	-0.69	-0.30	5.45	-6.20	-6.24	-12.43	-6.40	-12.31	-5.83	-6.14	-6.00	-5.88
SE	0.60	0.55	0.73	21.06	21.07	21.08	44.09	21.09	42.61	21.08	21.08	21.07	21.07

Table 11. Count of gyrfalcon nesting sites sampled, detected, colonized, extinct, static, and common from 2015 - 2024 for birds breeding in the vicinity of the Meadowbank Complex.

year	sampled	detected	colonized	extinct	static	common
2015	14	4	NA	NA	NA	NA
2016	16	2	1	3	10	14
2017	15	2	1	1	13	15
2018	1	0	0	0	1	1
2019	16	2	0	0	1	1
2020	1	0	0	0	1	1
2021	17	5	0	0	1	1
2022	18	4	1	3	13	17
2023	18	5	3	2	13	18
2024	18	6	5	4	9	18

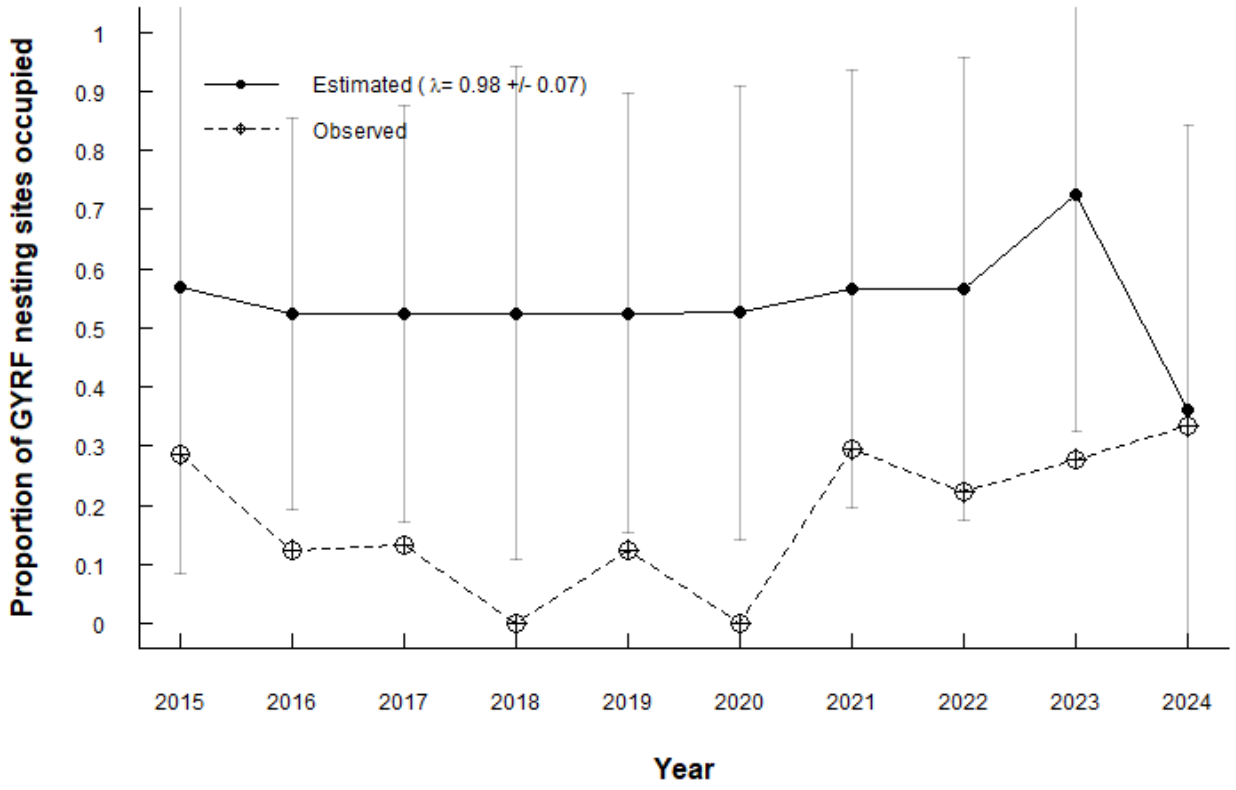


Figure 8. Proportion of GYRF nesting sites occupied from 2015 – 2024 in the vicinity of the Meadowbank Complex. The proportion observed (open circles with dashed lines) are point estimates without error bars, and do not account for detection error. The proportion estimated (closed circles with solid lines) accounts for detection error and includes standard error bars. Lambda = 0.98±0.07

Reproductive Success

Table 12. Estimates of reproductive success for peregrine falcons, rough-legged hawks, and gyrfalcons detected in 2016 and 2021 – 2024 during broad scale surveys in the vicinity of the Meadowbank Complex. Values are reported as number of young hatched from a single nesting attempt, regardless of nestling age at the time they were observed. Because nestling age varied considerably between years and among sites, measures of annual productivity per se are expected to be biased high.

	Peregrine Falcon					Rough-legged Hawk					Gyrfalcon				
Year	2016	2021	2022	2023	2024	2016	2021	2022	2023	2024	2016	2021	2022	2023	2024
Occupied	32	25	32[!]	30	41	12	10	7	6	7	2	5	4	5	6
Nestlings	9	9	37	9	14	20	11	6	3	5	4	6	0	2	2
Productivity	0.28	0.36	1.16	0.30	0.34	1.67	1.1	0.86	0.50	0.83	2.00[*]	1.20[*]	0.00[*]	0.40[*]	0.33[*]

[!] Count of sites at which nestlings were detected, [*] Gyrfalcon nestlings likely fledged prior to surveys.

Conclusion

This report applies GN-DoE guidelines (Government of British Columbia 2013) to assess potential disturbance to known nesting sites that have been identified over the course of nine survey-years. Agnico Eagle has detected peregrine falcon nesting sites in 17 rock quarries excavated for building and maintenance of the AWAR Road. Gyrfalcons have been detected nesting at one quarry. To date there have been no instances of rough-legged hawks nesting in rock quarries. To date there have been no instances of raptors establishing nests on artificial structures along the Whale Tail Haul Road or Whale Tail site.

Monitoring has focused on searching for, documenting, and mapping nesting sites for three raptor species (peregrine falcons, rough-legged hawks, and gyrfalcons). Study design was limited to single surveys in some years, which limits estimation of detection error. To address this limitation, starting in 2021, the study design was updated to incorporate multiple surveys annually, and took advantage of the distribution of known nesting sites to monitor occupancy as a function of distance to project-related disturbance. This approach addresses the GN comment in the 2018 Annual Report regarding the potential for insufficient power to detect the project-related effects by correcting for inconsistent monitoring within and among seasons. There has been no incident requiring permitting for removal of a nest (Term and Condition 36).

This report meets Term and Condition 33 by documenting and mapping raptor nesting sites (Figure 4, Table 13). There is no evidence for project-related related disturbance effects for peregrine falcons, rough-legged hawk occupancy, and gyrfalcons.

In 2024, pre-season deterrence was conducted at two sites known to harbour raptors for quarries along the AWAR where project-related activity was expected. Despite ongoing in-season and broad scale monitoring there is currently no history of nesting raptors along the WTHR. Where occupied nesting sites where detected, mine-related activity within the quarries was restricted. Nest visits were conducted periodically to conduct egg and nestling counts. Presence of nesting pairs was not made public to minimize disturbance. It is possible that the effect of distance to disturbance for peregrine falcons is related to the quantity of nesting sites that have been established in quarries creating a bias for nesting sites located close to the project footprint. In 2024, additional survey effort was conducted for nesting sites parallel to, and far from the AWAR in an attempt to reduce any potential bias that exists. In 2024, of the 5 peregrine falcon nesting sites where nestlings were detected, only one was located on a natural ledge (i.e., 4 were located in roadside quarries). In addition, 10 of 14 nestlings detected were produced in nests located in roadside quarries. Agnico Eagle will continue monitoring and management of Falcon according to the TEMP. Further update will be discussed with the TAG, as needed.

Table 13. Geographic coordinates (decimal degrees), distance to disturbance (Km) for known nesting sites surveyed between 2015 and 2024. Nesting sites that require management plans are identified.

NSID	Quarry	LAT	LON	PEFA	RLHA	GYRF	minD2D
2	NA	65.1705	-96.0669	1	0	0	2.4
4	NA	65.2687	-96.2974	1	0	0	4.7
5	NA	65.4373	-96.5821	0	1	0	2.9
6	NA	65.4375	-96.5886	1	0	0	2.8
7	NA	65.4425	-96.5963	0	0	1	3.2
9	NA	65.4508	-96.6041	1	1	0	4.1
10	NA	65.447	-96.6058	0	0	0	3.6
11	NA	65.4456	-96.6039	0	1	1	3.5
12	NA	65.4438	-96.5928	0	0	1	3.4
14	NA	65.4419	-96.7278	1	0	0	2.9
16	NA	65.4441	-96.7286	0	1	1	3.1
17	NA	65.4449	-96.7334	1	1	0	3.3
20	NA	65.5107	-96.9705	1	0	0	15.3
21	NA	65.5366	-96.9563	1	0	0	17.1
23	NA	65.547	-96.7894	1	1	0	14.9
24	NA	65.5488	-96.7702	1	1	0	14.9
25	NA	65.5691	-96.82	1	1	0	17.7
26	NA	65.572	-96.8261	1	0	1	18.0
27	NA	65.5984	-96.9029	1	1	0	22.0
28	NA	65.6049	-96.9071	1	1	1	22.7
31	NA	65.1223	-95.8498	1	0	0	7.1
32	NA	65.1177	-95.8505	1	0	0	6.8
34	Q21	65.288	-96.3603	1	0	0	2.3
36	NA	65.5213	-96.3184	1	0	0	18.1
38	NA	65.4844	-96.1955	1	0	0	20.5
39	NA	65.5273	-96.298	1	0	0	19.2
41	NA	65.5754	-96.2762	1	0	0	23.7
42	NA	65.1109	-96.1045	1	0	0	0.5
44	Q19	64.9376	-96.2774	1	0	0	0.0
45	Q18	64.9187	-96.307	1	0	0	0.0
46	NA	65.3424	-96.4942	1	0	0	1.6
49	NA	65.2672	-96.3507	1	1	0	2.7
51	NA	65.0982	-96.1389	1	0	0	2.6
52	NA	65.0708	-96.152	1	0	0	1.7
54	NA	65.1041	-96.2826	1	1	0	0.6
55	NA	65.2811	-96.6848	1	0	0	8.8
58	NA	65.4316	-96.6778	1	0	0	1.5
61	NA	65.1749	-95.8958	1	0	0	9.3
62	NA	65.1287	-96.2463	1	0	0	1.5
63	NA	65.1124	-96.3323	1	0	0	0.6

64	NA	65.1691	-96.6444	1	0	0	10.2
65	NA	65.2056	-96.6023	0	1	0	6.6
66	NA	65.1921	-96.5917	1	0	0	7.1
67	NA	65.2015	-96.6061	1	1	0	7.0
68	NA	65.2164	-96.7209	1	0	0	11.5
69	NA	65.4399	-96.9561	1	0	0	10.4
70	NA	65.4155	-97.1108	1	0	0	17.0
71	NA	65.4791	-96.7799	0	0	1	7.5
73	NA	65.4566	-96.7737	1	0	1	5.1
74	NA	65.4548	-96.7583	1	1	0	4.7
75	NA	65.4552	-96.7645	1	1	0	4.8
76	NA	65.4385	-96.6751	0	0	1	2.3
77	NA	65.4438	-96.6637	0	0	1	2.8
78	NA	65.4527	-96.4856	1	1	0	7.2
79	NA	65.4562	-96.3541	1	1	0	12.8
83	NA	65.5043	-97.2294	1	0	0	24.8
85	NA	65.5011	-97.0226	1	1	1	16.4
86	NA	65.506	-97.02	0	1	0	16.6
87	NA	65.5096	-97.0309	1	1	0	17.3
88	NA	65.5104	-97.0353	1	1	0	17.5
89	NA	65.5229	-97.0726	1	1	0	19.7
90	NA	65.5239	-97.0747	1	0	1	19.8
91	NA	65.4693	-96.4458	1	0	0	9.8
92	NA	65.4903	-96.2212	1	0	0	20.0
93	NA	65.4429	-96.6009	0	0	1	3.2
94	NA	65.4598	-96.9551	1	1	0	11.2
95	NA	65.518	-97.1627	1	1	0	22.8
97	NA	65.578	-96.9643	1	1	0	21.1
99	NA	65.5352	-96.7453	1	1	0	13.2
100	NA	65.4894	-96.717	1	1	0	7.9
104	NA	65.0928	-96.142	1	0	0	3.0
107	NA	65.2139	-96.7367	1	0	0	12.3
108	NA	65.5387	-97.1977	0	1	1	25.4
109	NA	65.5396	-97.1966	1	1	1	25.4
112	NA	65.4418	-96.7152	0	0	0	2.7
117	NA	65.4444	-96.9512	1	0	0	10.3
119	NA	65.58991	-96.9895	0	1	0	22.9
121	NA	65.5451	-97.1639	1	0	0	24.6
122	NA	65.5435	-97.1504	0	1	0	23.9
123	NA	65.4592	-96.8975	1	0	0	8.9
126	NA	65.4299	-96.6958	0	1	0	1.3
127	NA	65.5656	-97.0678	1	0	1	22.9
128	NA	65.4885	-96.8873	1	0	0	10.9
130	Q22	65.0427	-96.157	1	0	0	0.0

131	Q20	64.9706	-96.2202	1	0	0	0.0
132	Q17	64.8592	-96.3248	1	0	0	0.0
133	Q16	64.8384	-96.3178	1	0	0	0.0
134	Q15	64.8166	-96.327	1	0	0	0.0
136	Q13	64.7718	-96.344	1	0	0	0.0
140	Q9	64.6471	-96.309	1	0	0	0.0
141	Q8	64.6341	-96.3019	1	0	0	0.0
142	Q7	64.6092	-96.2829	1	0	1	0.0
144	Q5	64.5703	-96.2423	1	0	0	0.0
146	Q3	64.5038	-96.1266	1	0	0	0.0
147	Q2	64.4244	-96.0506	1	0	0	0.0
148	Q1	64.3576	-96.001	1	0	0	0.0
149	NA	64.2989	-95.9356	1	0	0	0.8
150	NA	64.9208	-96.08	1	1	0	1.8
150	NA	64.6546	-95.7333	1	0	0	11.0
152	NA	64.58264	-96.1892	1	0	0	1.5
154	NA	64.66022	-96.1853	1	0	0	1.5
156	Q21	65.00269	-96.2243	1	0	0	0.0
157	NA	65.46099	-96.7695	0	0	1	5.5
158	NA	65.21485	-95.8341	0	1	0	14.2
160	NA	64.7146	-95.8378	1	0	0	6.1
161	NA	64.591	-95.714	1	0	0	11.8
167	QE30	65.225	-96.401	1	0	0	0.0

References

Agnico Eagle Mine, M. B. D. 2019. Terrestrial Ecosystem Management Plan, V7, June 2019.

Bechard, M. J., and T. R. Swem. 2002. Rough-legged Hawk: Buteo lagopus. Birds of North America:1-31.

Bock, C. E., J. H. Bock, and L. W. Lepthien. 1977. Abundance patterns of some bird species wintering on great-plains of USA. Journal of Biogeography **4**:101-110.

Bock, C. E., and L. W. Lepthien. 1976. Geographical ecology of common species of buteo and parabuteo wintering in North America. Condor **78**:554-557.

Bradley, M., and L. W. Oliphant. 1991. The diet of peregrine falcons in rankin inlet, northwest-territories - an unusually high proportion of mammalian prey. Condor **93**:193-197.

Burnham, W. 1983. Artificial incubation of falcon eggs. The Journal of Wildlife Management **47**:158-168.

Cade, T. J. 1982. Falcons of the world. Comstock/Cornell University Press, Ithaca, New York.

Clum, N. J., and T. J. Cade. 1994. Gyrfalcon. Falco rusticolus. Birds of North America **114**:1-28.

Court, G. S., C. C. Gates, and D. A. Boag. 1988. Natural-history of the Peregrine Falcon in the Keewatin district of the northwest-territories. Arctic **41**:17-30.

Ferguson-Lees, J., D. Christie, J. Ferguson-Lees, and D. Christie. 2005. Raptors of the world: a field guide.

Ferguson-Lees, J., D. A. Christie, J. Ferguson-Lees, and D. A. Christie. 2001. Raptors of the world.

Franke, A. 2016. Population estimates for Northern Juvenile peregrine falcons with implications for harvest levels in North America. Journal of Fish and Wildlife Management **7**:36-45.

Franke, A., K. Falk, K. Hawkshaw, S. Ambrose, D. L. Anderson, P. J. Bente, T. Booms, K. K. Burnham, J. Ekenstedt, and I. Fufachev. 2020. Status and trends of circumpolar peregrine falcon and gyrfalcon populations. Ambio **49**:762-783.

Agnico Eagle Mine, M. B. D. 2019. Terrestrial Ecosystem Management Plan, V7, June 2019.

Bechard, M. J., and T. R. Swem. 2002. Rough-legged Hawk: Buteo lagopus. Birds of North America:1-31.

Bock, C. E., J. H. Bock, and L. W. Lepthien. 1977. Abundance patterns of some bird species wintering on great-plains of USA. Journal of Biogeography **4**:101-110.

Bock, C. E., and L. W. Lepthien. 1976. Geographical ecology of common species of buteo and parabuteo wintering in North America. Condor **78**:554-557.

Bradley, M., and L. W. Oliphant. 1991. The diet of peregrine falcons in rankin inlet, northwest-territories - an unusually high proportion of mammalian prey. Condor **93**:193-197.

Burnham, W. 1983. Artificial incubation of falcon eggs. The Journal of Wildlife Management **47**:158-168.

Cade, T. J. 1982. Falcons of the world. Comstock/Cornell University Press, Ithaca, New York.

Clum, N. J., and T. J. Cade. 1994. Gyrfalcon. Falco rusticolus. Birds of North America **114**:1-28.

Court, G. S., C. C. Gates, and D. A. Boag. 1988. Natural-history of the Peregrine Falcon in the Keewatin district of the northwest-territories. Arctic **41**:17-30.

Ferguson-Lees, J., D. Christie, J. Ferguson-Lees, and D. Christie. 2005. Raptors of the world: a field guide.

Ferguson-Lees, J., D. A. Christie, J. Ferguson-Lees, and D. A. Christie. 2001. Raptors of the world.

Franke, A. 2016. Population estimates for Northern Juvenile peregrine falcons with implications for harvest levels in North America. Journal of Fish and Wildlife Management **7**:36-45.

Franke, A., K. Falk, K. Hawkshaw, S. Ambrose, D. L. Anderson, P. J. Bente, T. Booms, K. K. Burnham, J. Ekenstedt, and I. Fufachev. 2020. Status and trends of circumpolar peregrine falcon and gyrfalcon populations. Ambio **49**:762-783.

Fuller, M. R., W. S. Seegar, and L. S. Schueck. 1998. Routes and travel rates of migrating Peregrine Falcons *Falco peregrinus* and Swainson's Hawks *Buteo swainsoni* in the western hemisphere. Journal of Avian Biology **29**:433-440.

Government of British Columbia. 2013. Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia: A companion document to *Develop with Care* (Appendix B). Pages 137-143.

Hanski, I. 1991. The Functional-Response of Predators - Worries About Scale. Trends in Ecology & Evolution **6**:141-142.

Jaffre, M., A. Franke, A. Anctil, P. Galipeau, E. Hedlin, V. Lamarre, V. L'herault, L. Nikolaiczuk, K Peck, B. Robinson, and J. Bêty. 2015. Écologie de la reproduction du faucon pèlerin au Nunavut. Le Naturaliste Canadien **139**:54-64.

Johnsgard, P. A., and P. A. Johnsgard. 1990. Hawks, eagles & falcons of North America. Biology and natural history.

Kirk, D. A., and C. Hyslop. 1998. Population status and recent trends in Canadian raptors: A review. Biological Conservation **83**:91-118.

Poole, K. G. 1987. Aspects of the ecology, food habits and foraging characteristics of Gyrfalcons in the central Canadian Arctic. Raptor Research **21**:80-80.

Poole, K. G., and D. A. Boag. 1988. Ecology of Gyrfalcons, *falco-rusticolus*, in the central canadian arctic - diet and feeding-behavior. Canadian Journal of Zoology-Revue Canadienne De Zoologie **66**:334-344.

Poole, K. G., and R. G. Bromley. 1988. Natural-history of the Gyrfalcon in the central Canadian Arctic. Arctic **41**:31-38.

Potapov, E. R. 1997. What determines the population density and reproductive success of rough-legged buzzards, Buteo lagopus, in the Siberian tundra? Oikos **78**:362-376.

R Development Core Team. 2019. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna Austria **URL http://www.R-project.org/**.

Ratcliffe, D. 1993. The Peregrine Falcon. 2nd edn. edition. T. and A. D. Poyser, Carlton, England.

SARA. 2002, as amended. Species at Risk Act S.C. 2002, c. 29. Available at: http://laws-ois.justice.gc.ca/eng/acts/s-15.3/

Schmutz, J. K., R. W. Fyfe, U. Banasch, and H. Armbruster. 1991. Routes and timing of migration of falcons banded in Canada. Wilson Bulletin **103**:44-58.

Watson, J. W. 1986. Temporal fluctuations of rough-legged hawks during carrion abundance. Raptor Research **20**:42-43.

Yates, M. A., K. E. Riddle, and F. P. Ward. 1988. Recoveries of Peregrine Falcons migrating through the eastern and central United States. Pages 471 - 484 *in* T. J. Cade, Enderson, J.H, White, C.M., editor. Peregrine Falcon Populations; Their Management and Recovery. The Peregrine Fund, Boise, Idaho.

Fuller, M. R., W. S. Seegar, and L. S. Schueck. 1998. Routes and travel rates of migrating Peregrine Falcons *Falco peregrinus* and Swainson's Hawks *Buteo swainsoni* in the western hemisphere. Journal of Avian Biology **29**:433-440.

Government of British Columbia. 2013. Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia: A companion document to *Develop with Care* (Appendix B). Pages 137-143.

Hanski, I. 1991. The Functional-Response of Predators - Worries About Scale. Trends in Ecology & Evolution **6**:141-142.

Jaffre, M., A. Franke, A. Anctil, P. Galipeau, E. Hedlin, V. Lamarre, V. L'herault, L. Nikolaiczuk, K Peck, B. Robinson, and J. Bêty. 2015. Écologie de la reproduction du faucon pèlerin au Nunavut. Le Naturaliste Canadien **139**:54-64.

Johnsgard, P. A., and P. A. Johnsgard. 1990. Hawks, eagles & falcons of North America. Biology and natural history.

Kirk, D. A., and C. Hyslop. 1998. Population status and recent trends in Canadian raptors: A review. Biological Conservation **83**:91-118.

Poole, K. G. 1987. Aspects of the ecology, food habits and foraging characteristics of Gyrfalcons in the central Canadian Arctic. Raptor Research **21**:80-80.

Poole, K. G., and D. A. Boag. 1988. Ecology of Gyrfalcons, *falco-rusticolus*, in the central canadian arctic - diet and feeding-behavior. Canadian Journal of Zoology-Revue Canadienne De Zoologie **66**:334-344.

Poole, K. G., and R. G. Bromley. 1988. Natural-history of the Gyrfalcon in the central Canadian Arctic. Arctic **41**:31-38.

Potapov, E. R. 1997. What determines the population density and reproductive success of rough-legged buzzards, Buteo lagopus, in the Siberian tundra? Oikos **78**:362-376.

Ratcliffe, D. 1993. The Peregrine Falcon. 2nd edn. edition. T. and A. D. Poyser, Carlton, England.

SARA. 2002, as amended. Species at Risk Act S.C. 2002, c. 29. Available at: http://laws-ois.justice.gc.ca/eng/acts/s-15.3/

Schmutz, J. K., R. W. Fyfe, U. Banasch, and H. Armbruster. 1991. Routes and timing of migration of falcons banded in Canada. Wilson Bulletin **103**:44-58.

Watson, J. W. 1986. Temporal fluctuations of rough-legged hawks during carrion abundance. Raptor Research **20**:42-43.

Yates, M. A., K. E. Riddle, and F. P. Ward. 1988. Recoveries of Peregrine Falcons migrating through the eastern and central United States. Pages 471 - 484 *in* T. J. Cade, Enderson, J.H, White, C.M., editor. Peregrine Falcon Populations; Their Management and Recovery. The Peregrine Fund, Boise, Idaho.

APPENDIX H

Waterbird Monitoring Publication

AVIAN CONSERVATION & ECOLOGY

VOLUME 19, ISSUE 2, ARTICLE 17

Holmes, G. I., E. Nol, and P. A. Smith. 2024. Deterrents intended to mitigate mining effects mostly fail to change nesting behavior of Arctic breeding birds. Avian Conservation and Ecology 19(2):17. https://doi.org/10.5751/ACE-02714-190217
Copyright © 2024 by the author(s). Published here under license by the Resilience Alliance. Open Access. CC-BY 4.0

Research Paper

Deterrents intended to mitigate mining effects mostly fail to change nesting behavior of Arctic breeding birds

Gill I. Holmes [1,2], *Erica Nol* [1] *and Paul A. Smith* [3]
[1]Trent University, [2]Canadian Wildlife Service, Environment and Climate Change Canada, [3]Wildlife Research Division, Environment and Climate Change Canada

ABSTRACT. Mining is an important economic driver in the Arctic and leads to land-use changes and habitat loss for Arctic breeding birds. Various techniques are used to mitigate the impacts of extractive mining on wildlife, including deterrents designed to keep wildlife away from activities that may cause harm to animals. This study assessed the efficacy of deterrents intended to prevent birds from nesting in tundra areas that were planned for flooding during mining pit expansion. We used visual and audio deterrents (flash tape and hawk effigies, as well as predator and prey distress calls) to attempt to discourage nesting by birds at a gold mine north of Baker Lake, Nunavut. We used a before-after control-impact design to determine changes in birds' territory densities before and after deployment of deterrent treatments. We assessed whether deterrent intensity had an impact on nest survival of the most common passerines, Lapland Longspur (*Calcarius lapponicus*), Horned Lark (*Eremophila alpestris*), and shorebirds, Semipalmated Sandpiper (*Calidris pusilla*), and Least Sandpiper (*Calidris minutilla*), because of the potential for deterrents to increase disturbance to incubating birds. Using temperature probes inserted into nests, we also determined whether deterrents influenced incubation behavior of Lapland Longspurs. Deterrents did not impact territory densities except in dissuading Horned Larks. Deterrents did not result in lower nest survival of passerines or shorebirds, nor did deterrents affect the frequency of incubation recesses for incubating Lapland Longspur females. We conclude that, in general, the deterrents used in this study were not effective at preventing birds from using treatment areas, and therefore we advise against the use of these techniques for mitigating the effects of mine flooding for Arctic-nesting birds.

Les mesures dissuasives destinées à atténuer les effets de l'exploitation minière ne parviennent généralement pas à modifier le comportement de nidification des oiseaux nicheurs arctiques

RÉSUMÉ. L'exploitation des ressources minières est un moteur économique majeur en Arctique et entraîne des changements d'affectation des terres et la perte d'habitats pour les oiseaux nicheurs arctiques. Différentes techniques sont employées pour atténuer l'impact de l'extraction minière sur la faune sauvage, notamment des moyens dissuasifs conçus pour éloigner les animaux des activités qui pourraient leur nuire. La présente étude a permis d'évaluer l'efficacité des moyens dissuasifs destinés à empêcher les oiseaux de nicher dans les secteurs de toundra qu'il était prévu d'inonder lors de l'agrandissement des puits d'extraction. Nous avons utilisé des dispositifs d'effarouchement sonores et visuels (rubalises et silhouettes d'oiseaux de proie ainsi que la diffusion de cris d'alarme de proies et de prédateurs) pour tenter de dissuader la nidification à proximité d'une mine d'or située au nord du lac Baker (Nunavut). Un plan de contrôle de l'impact avant/après a été mis en place afin de mesurer les changements de densité des territoires des oiseaux avant et après le déploiement des traitements dissuasifs. Nous avons évalué si l'intensité des dispositifs dissuasifs employés exerçait un impact sur la survie des nids des passereaux les plus communs : le Bruant lapon (*Calcarius lapponicus*), l'Alouette hausse-col (*Eremophila alpestris*), et des limicoles comme le Bécasseau semipalmé (*Calidris pusilla*), et le Bécasseau minuscule (*Calidris minutilla*), en raison de leur potentiel d'accroissement du dérangement en cours d'incubation. L'insertion de sondes thermiques dans les nids a permis de tester si les moyens de dissuasion modifiaient le comportement d'incubation chez le Bruant lapon. Les moyens de dissuasion n'ont pas modifié la densité des territoires, sauf dans le cas de l'Alouette hausse-col. Ils n'ont pas conduit à une diminution de la survie des nids de passereaux ni des nids de limicoles. Ils n'ont pas non plus affecté la fréquence des pauses d'incubation par les femelles de Bruants lapons. Nous en concluons que, d'une manière générale, les moyens de dissuasion utilisés dans cette étude n'ont pas été efficaces pour prévenir l'utilisation des zones traitées, et nous ne conseillons donc pas de continuer à employer ces techniques en vue de réduire les effets des inondations de mines sur les oiseaux nicheurs arctiques.

Key Words: *Arctic-nesting bird; audio deterrents; incidental take; incubation behavior; mining and resource extraction; nest daily survival rate; territory density; visual deterrents*

INTRODUCTION

Mining and other forms of resource extraction are important economic drivers in Canada's North because they provide well-paying, stable jobs for people living in rural northern communities (Cameron and Levitan 2014, Belayneh et al. 2018). In 2014, 18% of the gross domestic product of Nunavut, Canada, was associated with resource extraction (AMAP 2017). Mineral, oil, and gas exploration are predicted to grow across the Arctic landscape (Kondratiev 2020), leading to land-use changes and disturbance of wildlife (Wilson et al. 2013). Although resource

Corresponding author: Gill I Holmes, giholmes91@gmail.com

extraction plays an important role in northern economies, balancing economic growth with conservation and respect for Indigenous rights will be a challenge (Arbo et al. 2012, Bernauer 2019, Tolvanen et al. 2019).

Because of the limited human footprint, Arctic ecosystems are often considered secure from human-induced change. However, the effects of resource extraction on habitat loss can be substantial at a local or regional scale. For example, Pirie et al. (2009) predicted an 8 to 30% decrease in nesting habitat for Whimbrel (*Numenius phaeopus*) while running scenario-based analyses of subsidence-induced flooding related to natural gas extraction and development within the Kendall Island Bird Sanctuary (623 km²) and Fish Island (7560 km²) in the outer Mackenzie Delta, Northwest Territories. An increase in resource extraction in northern landscapes means a greater likelihood of loss of nesting habitat (Gajera et al. 2013, Bernath-Plaisted and Koper 2016). More subtle effects are also possible, mines may have a relatively limited effect on northern species (Smith et al. 2005, Merondun et al. 2024; see also https://www.nwtgeoscience.ca/forum/session/long-term-monitoring-finds-no-effect-Arctic-mine-migratory-birds), but mines and associated infrastructure may alter behavior of breeding birds and, as a result, nest success (Male and Nol 2005, Van Wilgenburg et al. 2013, Ludlow and Davis 2018).

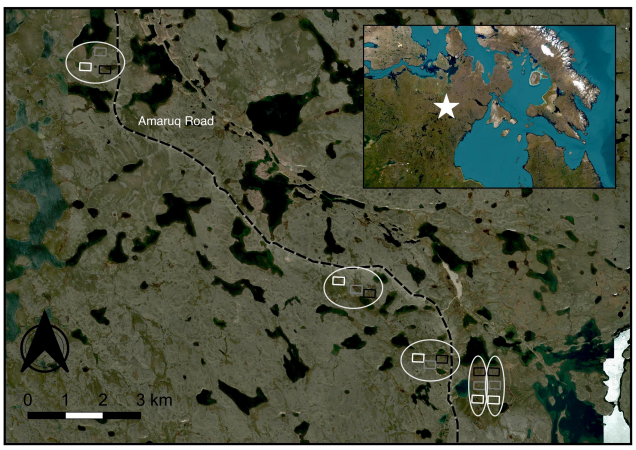
Some resource extraction activities can be timed to minimize disturbance to nesting birds, but other activities must be carried out at times that conflict with the timing of breeding of birds. For example, large-scale dewatering of lakes for mining pit development often occurs during the spring and early summer, adding to run-off on the tundra because water is directed elsewhere. This additional run-off during the breeding season can lead to destruction of nesting areas, or direct loss of nests, through flooding (Pirie et al. 2009, Gajera et al. 2013).

The Migratory Birds Convention Act (MBCA; Parliament of Canada 1994) prohibits disturbance, or destruction of migratory birds and their nests, including unintentional harm through incidental take, which is defined as the inadvertent harming, killing, disturbance, or destruction of migratory birds, nests, and eggs (CWS 2014). Nest losses due to mining development are considered incidental take (Van Wilgenburg et al. 2013) and are a concern in many activities related to resource development, including vegetation clearing, road or pipeline maintenance, and flooding from dams used to control water on the landscape. Although incidental take of migratory birds or their nests is sometimes unavoidable when carrying out otherwise permitted activities, industry has a legal requirement to understand and mitigate the impacts.

Deterrents can be used to discourage birds from occupying mining sites that may be harmful to them (Boag and Lewin 1980, Ronconi and St. Clair 2006). Deterrents are used to convey to birds, through perceived predation risk, that prospective nesting, feeding, or roosting areas are not suitable, thus discouraging birds from settling in or remaining in areas where human activities might cause them harm (Ball 2000, Schlichting et al. 2017) or where humans identify birds as pests. For example, deterrents such as robotic peregrine falcon effigies, audio calls of predators, high-intensity strobe lights, and propane cannons are used at tailing ponds in the oil sands region of Alberta, Canada, to prevent birds from using these contaminated waters (Ronconi et al. 2004). Although deterrents have been used in various situations, there is limited research on the effectiveness of various deterrent technologies (Marcus et al. 2007, Kruk et al. 1997), particularly in Arctic regions (Umlah 1996, Racca 2005).

Agnico Eagle Mines Ltd. proposed and built the Whale Tail Project in central Nunavut, Canada as an expansion to their gold mining activities, the Meadowbank Complex, which had first become commercially productive in 2010 (Agnico Eagle Mines Ltd. 2024). This project included the construction of two dikes within the northern portion of Whale Tail Lake that diverted water (dewatering) from the Whale Tail mining pit into surrounding lakes and tributaries (Fig. 1). One dike resulted in flooding that elevated water levels by 4 m (pre-flood water elevation: 152 m.a.s.l., post-flood 156 m.a.s.l.) from May 2019 to August 2020, causing approximately 157 ha of tundra adjacent to the lakes to flood. This flooding coincided with timing of bird nesting over two breeding seasons. We were asked by mine personnel to test potential solutions that would deter birds from nesting within the predicted flood area during dewatering, to minimize the number of bird nests lost (i.e., incidental take) due to flooding.

Fig. 1. Map of the study site, located north of Baker Lake, Nunavut, along Amaruq Road between Amaruq Mine and Meadowbank Mine, run by Agnico Eagle Mines Ltd. Plots were selected in five clusters (encircled), with two clusters in proximity (bottom right). Plots border colors show treatment type; black is high-intensity treatment, darker gray is low-intensity treatment, and white is control.



Our objective was to test the effectiveness of visual and audio deterrents to prevent birds from nesting in tundra areas exposed to mining-induced flooding. We accomplished this objective with the use of an experimental design applied to plots located outside the proposed flood area. We hypothesized that deterrent use would dissuade Arctic-nesting birds from establishing nests. We also assessed the hypothesis that, if birds failed to be deterred and nested in plots with deterrents that they would exhibit a change in behavior from disturbance by deterrents, and that these behavioral changes could potentially impact daily nest survival. Changes in behaviors due to deterrents could include limiting time on nests or outright abandoning active nests. We compared (1)

territory densities, (2) daily nest survival of passerines and apparent survival of shorebirds before and after deterrent deployment, and (3) incubation behavior of Lapland Longspur (*Calcarius lapponicus*) between plots with and without deterrents. We predicted that density of territorial males would be reduced from pre-treatment levels in plots where we applied deterrents, whereas there should be no such reduction in density in control plots. We predicted that daily nest survival of passerines and apparent survival of shorebirds would be higher in the pre-treatment compared to treatment plots but would remain similar before and after treatments in control plots. We also predicted that incubating female Lapland Longspur would show more frequent and longer incubation off-bouts within deterrent plots than in control plots. We report on the time used in implementing deterrents and their costs to assist others in determining whether the effort and cost are warranted.

METHODS

Study area and design

The study was conducted in the Kivalliq Region of Nunavut, 130 km north of Baker Lake (N 65° 24′ 23.98″, W 96° 40′ 32.68″) in June and July of 2018 and 2019. Situated in the Northern Arctic ecozone, the landscape is primarily tundra heath, lichen, and rock in the uplands and graminoid-dominated wetlands in the lowlands, with scattered lakes and ponds (Campbell et al. 2012). June temperatures in the study area averaged 4.0 °C (min: -0.8, max: 8.7) and 6.7 °C (min: 2.5, max: 10.6) in 2018 and 2019, respectively, and July temperatures averaged 13.5 °C (min: 7.9, max: 18.9) and 10.5 °C (min: 6.7, max: 14.8) in 2018 and 2019, respectively. Precipitation totals for June and July were 132 mm and 139 mm in 2018 and 2019, respectively (Agnico Eagle Mine weather station).

In 2018, we established 15 6-ha plots (300 x 200 m) along Amaruq Road (Fig. 1), 5–17 km south of Amaruq Mine for convenience of access. Plots were placed > 200 m from Amaruq Road to avoid potential impacts of road dust, which can cause early snowmelt and in turn, impact nest timing and success (Smith et al. 2010, Grabowski et al. 2013). These plots were located 13–18 km southeast from the area that was slated for flooding. The vegetation and bird communities within these study plots were primarily lowland wet sedge meadows, like those in nearby flooded areas (Holmes 2022).

We used a before-after control-impact study design (BACI; Smokorowski and Randall 2017). Study plots were grouped into five clusters of three plots, with each cluster consisting of one control plot and two deterrent plots. In each cluster, plots were randomly assigned to control or treatments. The same plots were used in the study in both years, with no deterrents deployed in 2018, and the deterrent treatments applied in 2019. The distance between clusters of plots was 1–9 km (Fig. 1). The location of plots was constrained by the need to select for lowland habitats.

We deployed deterrents from 6–17 June 2019, before most nests were initiated. The two deterrent treatments differed in their intensity (Table 1). The high-intensity treatment included a hawk-kite effigy, an audio deterrent system with four speakers, and ribbons of flash tape, distributed evenly throughout the 6-ha plot. The low-intensity treatment contained only a hawk-kite effigy and an audio deterrent system with four speakers (Table 1).

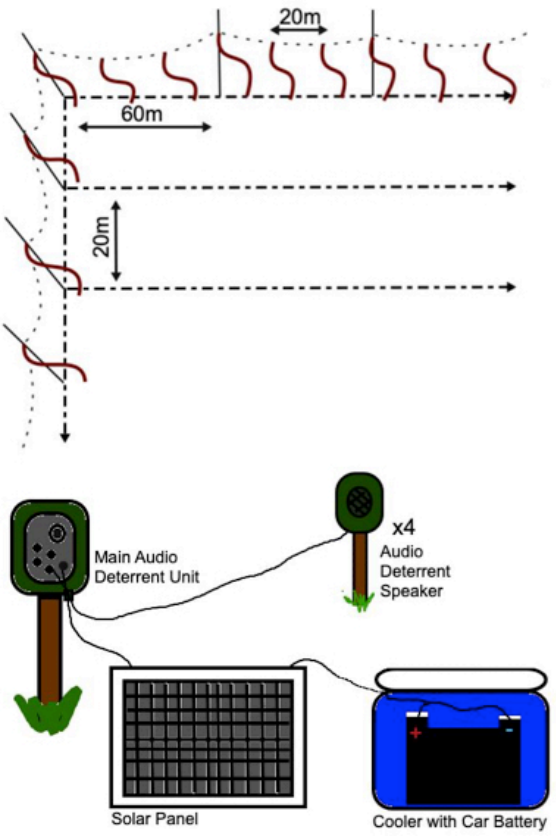
Table 1. Description of the two treatment types deployed in plots along Amaruq Road, Nunavut. Details include an outline of equipment, description of use, and frequency of use.

Treatment name	Deterrents used
High-intensity treatment	Audio deterrents: Super BirdXpeller® PRO by Bird-X, Inc. Speakers broadcasting all at once with recordings played randomly in non-sequential order, continuously for 24 hours at 10–30-minute intervals. Hawk effigy: Peregrine Falcon kite by Margo Supplies. Flash tape grid: 20 x 20 m grid.
Low-intensity treatment	Audio deterrents: Super BirdXpeller® PRO by Bird-X, Inc. Each speaker broadcasting one at a time with recordings playing in sequential order continuously for 24 hours at 5–10-minute intervals. Hawk effigy: Birds of Prey Falcon kite by Sutton Agricultural Enterprises. Flash tape grid: none

We erected hawk-kite effigies using 5.2 m tall fiberglass pole in the middle of each treatment plot, near to the central unit of the audio deterrent system. The hawk-kite effigies were attached to the top of the pole with a kite string, where they soared in the wind. We used two different brands of hawk-kites: Peregrine Falcon kite (Margo Supplies, High Water, Alberta) placed in the high-intensity treatment and Birds of Prey Falcon kite (Sutton Agricultural Enterprises, Salinas, California), placed in the low-intensity treatment (Table 1). Hawk-kite effigies were similar in size and structure, but with different materials and coloration.

Audio deterrents (Super BirdXpeller® PRO, Bird-X, Inc., Elmhurst, Illinois) consisted of a central unit with four speakers (sound pressure: 110–115 dB at 1 m). We placed the main unit in the middle of the 6-ha plot, with each speaker attached to a wooden stake, hammered into the tundra at a height of 1 m, at each cardinal direction, 25 m from the main unit. The Bird X unit played a mix of distress calls from American Crow (*Corvus brachyrhynchos*) and generalist predator calls (Ring-billed Gull, *Larus delawarensis*; Common Raven, *Corvus corax*; Blue Jay, *Cyanocitta cristata*; Black-billed Magpie, *Pica pica*; Peregrine Falcon, *Falco peregrinus*). Among these, only Common Raven and Peregrine Falcon occur in the area. Recorded calls of locally relevant predators (e.g., Arctic fox, *Vulpes lagopus*; Arctic ground squirrel, *Urocitellus parryii*; Rough-legged Hawk, *Buteo lagopus*; Parasitic Jaeger, *Stercorarius parasiticus*) are not available on these units. Although we acknowledge this large list of potential predator calls as a limitation of our design, other work has suggested that animals should respond to generalized predator calls especially if the calls are from taxonomically similar species (Ferrari et al. 2007). In the high-intensity plots, the four speakers in each plot played all at once, broadcasting one of the six predator calls at a time in random order continuously for 24 hr at 10–30-min intervals. In the low-intensity plots, one of the four speakers in each plot played one predator call at a time with the predator calls broadcasting sequentially (e.g., speaker 1 played Blue Jay, speaker 2 played Common Raven, etc.) continuously for 24 h at 5–10-min intervals. Both patterns of audio deterrent were broadcast from 10 June to 16 July. To maintain electrical power for the audio deterrents throughout the experiment, speakers were powered with 40-Ah 12-v car batteries and 25-W solar panels (Fig. 2).

Fig. 2. Two diagrams conveying the set up of deterrents within treatment types along Amaruq Road, Nunavut. Upper diagram displays the audio deterrent setup for both treatment plots, including the Bird-X Inc. Super BirdXpeller® PRO main unit with four speakers, each attached to a wooden stake, a cooler with a 14-V car battery, and solar panel. All the 12-V batteries and the main speaker units are connected to the solar panel's controller. The solar panel sat south-facing against the cooler, close to the main speaker unit in the middle of the plot. The four speakers were spaced 25 m from the main unit in each cardinal direction. Lower diagram displays the flash tape grid (20 x 20 m) setup within the high-intensity treatment plots. Plots were 300 x 200 m (6 ha), with aluminum angle stakes (indicated by a solid line) placed every 60 m across and every 20 m down with a total of 20 rows of aluminum angle. Monofilament fishing line (indicated by the dotted line between aluminum angle; 100-lb test Hercules PE braided fishing line, 4 Strands) was strung between aluminum angles, with a 5-m piece of flash tape (red squiggle; Birdscare Flash tape, Sutton Agricultural Enterprises) attached to the fishing line or aluminum angle every 20 m, throughout the grid (shown only on edges for clarity).



A grid was erected by stringing monofilament fishing line (100-lb test, Hercules PE braided fishing line, 4 Strands) between 1.5 m long, narrow (1.5 x 1.5 mm) aluminum angle stakes that we hammered 0.5 m into the tundra every 60 m across the 300 m length of the study plot, and every 20 m along the 200 m length of the plot (Fig. 2). Every 20 m along the monofilament lines, we affixed a piece of flash tape (Birdscare Flash tape, Sutton Agricultural Enterprises, Salinas, California): a metallic tape with red and silver on opposite sides, 30 mm wide and 0.025 mm thick. Each flash tape piece was 5 m long, with one end knotted to the fishing line and the other end free to sway with the wind.

Deterrents were maintained as needed every four days during nest monitoring by tightening the fishing line, replacing flash tape, ensuring that the hawk-kite effigy was still intact, and checking electrical connections and power supply for audio deterrents. Because effort required to use deterrents is an important practical consideration, we recorded the number of person-hours spent erecting and maintaining the deterrents and recorded the full cost to purchase the equipment and supplies used.

Species composition, territory mapping, nest searching, and monitoring

The breeding bird population in the study area consisted primarily of Arctic-nesting passerines, with lower densities of shorebirds and ducks. The four most common species were Lapland Longspur, Semipalmated Sandpiper (*Calidris pusilla*), Least Sandpiper (*Calidris minutilla*), and Horned Lark (*Eremophila alpestris*). Lapland Longspur and the two sandpiper species nest in low elevation sedge meadows, close to water bodies. Horned Lark nest at slightly higher elevations in adjacent upland, dry habitats (Camfield et al. 2010).

Nest searching, monitoring, and territory mapping occurred 4 June to 15 July. Territory mapping was most intensive at the beginning of each breeding season (4–25 June), after male birds arrived and began to sing and display. Territory mapping continued throughout the breeding season when males were observed singing and or in display. Once nesting began, there were fewer breeding displays. Mapping was done by following displaying males and recording the bird's location with a waypoint (± 3 m) using a Garmin GPS. We aimed to obtain a minimum of five waypoints for each territorial bird, every four days. While following males, we attempted to avoid disturbing them by staying low to the ground and moving only after the bird moved to a new position to sing. Because the habitat was very open, we were able to watch individual males move to new singing locations. When uncertain about the territory to which a singing bird belonged, we omitted the observations from calculations of territory size.

Nest searching was conducted by systematically walking plots and observing behavioral cues of breeding adults (e.g., flushing, mate courtship, alarm calls). Nests were marked with a tongue depressor driven partially into the ground within 5 m of the nest, in a random direction. The observer recorded nest coordinates using the average waypoint function in the Garmin GPS unit, as well as species, number of eggs present, and date found. The average waypoint function with Garmin is a method of averaging multi-sample waypoints to obtain a more accurate GPS position,

facilitating nest relocation. For nests found outside of the laying period, we floated eggs to determine nest age and to estimate initiation date and hatch date (adapted from Liebezeit et al. 2007).

Nests were monitored on a 4-day schedule until fates were determined. Nests of shorebirds with precocial young were considered successful if at least one egg hatched, whereas passerine nests with altricial young were considered successful if at least one chick fledged. Signs of predation (loss of a whole clutch, nest disturbance, large eggshell fragments, or yolk) or abandonment (no sign of adults or cold eggs; Mabee et al. 2006) indicated a failed nesting attempt.

Scientific permits were issued by Environment and Climate Change Canada under Migratory Birds Regulations Sections 4, 12, and 19. All animals used in this research paper were cared for in accordance with the guidelines set out by the Canadian Council on Animal Care and all methods regarding use of animals for this project were reviewed and approved by the Trent University Animal Care Committee.

Incubation behavior of Lapland Longspur, nest concealment, and weather

In 2019, we deployed Tinytag© (Tiny Tag Plus 2 Logger, TGP-4020, Gemini Data Loggers) temperature probes in nests of Lapland Longspurs located within treatment plots of either intensity that were < 20 m from flash tape or < 150 m from a deterrent audio speaker, and in nests within control plots to determine on-off bouts of incubating females. We placed 20 temperature probes within Lapland Longspur nests in 2019: 10 nests in control plots and 10 in treatment plots. Incubation data were obtained from 21–30 June and 3–4 July. We deployed one temperature probe in a Lapland Longspur renesting attempt from 10–18 July.

We inserted the temperature probe of the Tinytag© into the nest so that it was in contact with the brood patch of the incubating female. The data logger unit was secured under peat near the nest so as not to attract predators or rouse suspicion of incubating birds. Probes recorded a temperature every minute, providing a high-resolution dataset with which to evaluate incubation behavior (Joyce et al. 2001, Schneider and McWilliams 2007).

At each nest, we estimated vertical concealment as percentage of the nest concealed by vegetation when viewed from directly above. Ambient temperature data were collected from a weather station located at Amaruq Mine, Nunavut, operated by Agnico Eagle Mines Limited (N 65° 24′ 23.98″, W 96° 40′ 32.68″).

Statistical analysis

Territory densities

Territory maps that included a minimum of five waypoint locations of a singing male were delineated using minimum convex polygons (MCPs) in the R Studio package adehabitatHR (version 1.2.1335; Calenge 2006, RStudio Team 2020). We used MCP's to estimate relative rather than absolute territory size between treatments because it is a simple and commonly used estimator (Haenel et al. 2003). Nests in plots that were not associated within a delineated territory were given an assumed territory size by using the st_buffer function in sf package to assign a circular spatial buffer around the nest (Pebesma 2018). This buffer size was based on the average relative territory size that we documented for each species in the study, based on the MCP approach, i.e., average territory size (± SD) of Lapland Longspur = 3988 ± 4750 m²; Horned Lark = 7258 ± 9012 m²; Semipalmated Sandpiper and Least Sandpiper = 4295 ± 3646 m². We used the st_intersection function in the sf package (Pebesma 2018) to determine the proportion of each territory (MCP or buffer based) that occurred within the boundaries of the plots.

We tested for significance of differences in territory densities in our BACI design, by examining the interaction term between year (before/after) and treatment (Smokorowski and Randall 2017). We summed the count of territories in a plot (including the fraction within the plot for those that straddled the border) and converted them into a density (territories per km²) in each 6-ha plot, separately for each year (2018, 2019). We used a generalized linear mixed-effects model using the lme4 and lmerTest packages in R Studio (Bates et al. 2015, Kuznetsova et al. 2016) with density of territories as the response variable and treatments (high-intensity treatment, low-intensity treatment, and control, Table 1), year (2018 or 2019) and their interaction as fixed effects. We included an offset of observer-hours within the model to account for the number of hours spent nest searching and territory mapping in each plot. This was because we spent more time in treatment plots due to the need for deterrent maintenance. We included cluster as a random effect to account for the geographic association of plots within clusters.

This statistical model was first applied to assess potential changes in territory densities for all species combined, then for two shorebirds, and individually for Lapland Longspur and Horned Lark. Additionally, we assessed whether there was a difference in relative territory size of Lapland Longspur between treatment and control plots using a linear model (lm). We assessed the differences in relative territory size only for territories that had at least 50% of their area within a plot.

Daily survival rate of nests

We calculated daily nest survival rates (Mayfield 1961, Dinsmore and Dinsmore 2007) using the RMark package (Laake 2013) in R Studio for passerines because they had a sufficient sample size for such analyses. We started with 90 nests but excluded 13 nests with unknown fate. We converted ordinal dates into nest-specific dates (hereafter season-date) in which the first initiation date was season-date 0 (on 10 June, ordinal date 161, for passerines) and the final nest check was season-date 36 (16 July, ordinal date 197).

In addition to examining effects of treatment on daily nest survival, we assessed the effect of nest age (i.e., the age of a nest in days, where age 0 = the day that the first egg was laid) because this predictor variable is often important in explaining daily nest survival (Grant et al. 2005). We eliminated three nests from these analyses in which nest initiation date (and therefore nest age) was unknown. In the first stage of modeling, we ran six candidate models (including an intercept-only model) consisting of temporal variables: nest age, season-date, quadratic season-date (date²), cubic season-date (date³), and year. We found that nest age was not a good predictor of daily nest survival because it was not in a top or competitive model as judged by Akaike's information criterion adjusted for small sample size (AIC_c; i.e.,

ΔAIC_c > 6; Akaike 1973, Burnham et al. 2011). Therefore, we removed nest age from the model, which allowed us to add back the three nests lacking estimates of nest age (n = 77).

We then re-ran models consisting of temporal variables: season-date, quadratic season-date (date^2), cubic season-date (date^3), and year. We carried the top temporal model (date + date^2) from this stage of modeling forward, as a foundation for testing the impacts of treatment on daily nest survival, by considering variables: treatment, year, and the interaction of year and treatment. Lastly, we used AIC_c (Hurvich and Tsai 1991) to assess relative model support. We considered models with ΔAIC_c*** < 2 as competitive. In addition, only variables with 95% confidence intervals not overlapping zero were considered important for explaining nest daily survival rate (Fromberger et al. 2020).

We had too few nests to statistically compare daily nest survival rates between treatments for Semipalmated Sandpiper (n = 23) and Least Sandpiper. Therefore, we report apparent nest survival (proportion of successful nests out of total nests) among years and treatments for these species.

Incubation behavior

We assumed that when Tiny Tags registered temperatures within 3 °C of 39 °C that incubating Lapland Longspur females were present on the nest ("on bouts") and when nest temperature dropped to the ambient surrounding temperature that incubating birds had left the nest for an incubation recess ("off-bouts"). We used the program RHYTHM (1.0; Cooper and Mills 2005) in combination with Raven Lite (2.0) to automate measurements of length of off-bouts. We considered a drop in temperature greater than 3 °C within 1 minute to signal the start of an off-bout. This criterion differs slightly from that used in similar studies of Horned Lark (Camfield and Martin 2009, MacDonald et al. 2013), which considered a recess as a drop of > 3 °C in the nest and a decline in temperature that lasted more than 3 minutes. We chose our criteria to account for swift off-bouts that may last for less than three minutes, in situations where birds are potentially disturbed frequently by deterrents such as the flash tape. Results of the recesses estimated by Raven Lite (2.0) were manually examined for quality control. We manually added off-bouts in accordance with the above criterion where they were missed.

In a preliminary inspection of data, we noticed a greater number of recesses and longer recesses during daytime hours (6:00–18:00 CST) than during typical nighttime hours (18:00–6:00 CST), despite an average 20–21 hr of daylight in the study area during June and July (Government of Canada 2020). Therefore, to account for the effect of time of day (Camfield and Martin 2009), we separated data into periods of daytime and nighttime hours. We removed the first and last time-of-day period of the temperature recordings (i.e., immediately post-deployment and pre-retrieval) to account for the lack of an entire 12-hr period of incubation data. We calculated the number of off-bouts and proportion of time spent off the nest during each 12-hr period of night and day, for each incubation day of a nest. To evaluate whether incubation rhythm was impacted by treatment type, we used linear mixed-effects models using a maximum likelihood method of parameter estimation in the statistical package lme4 (Bates et al. 2015) in R Studio. We also removed data recorded on 1–2 July 2019 from the analysis due to two days of inclement weather that kept birds off their nests for over 12 hr. We focused analyses on incubation days 3–10, because sample size was insufficient for comparison of treatment versus control on days 1, 2, 11, and 12.

We modeled two response variables separately: proportion of time off the nest and number of off-bouts within 12-hr periods and included treatment type and nest fate as fixed effects and nest ID as a random factor to account for repeated sampling of individual nests. Because nest incubation patterns can potentially vary as a function of ambient temperature, time of day (day/night), and stage in the incubation cycle (nest age; Wiebe and Martin 1998, Camfield and Martin 2009, Ricklefs and Brawn 2012), we included these variables as fixed effects. Only one of the 20 nests that we monitored was known to be a second nesting attempt (i.e., a re-nest). Therefore, we did not include renesting as a factor in the analysis. We used AIC_c (Hurvich and Tsai 1991) to determine the strongest model.

We used an alpha of 0.05 to assess statistical significance for all analyses including for relative territory densities, daily nest survival, and incubation behavior.

RESULTS

Relative territory densities

Over the 2 years of study, we mapped a total of 118 territories of the focal species that had a portion of their area within the study plots. Of these 118 territories, 60 were not associated with a nest that we located, and 58 were associated with at least 1 nest. We found an additional 66 (53%) nests that did not meet the criteria for spot-mapping (5 waypoints per territory) and assigned the average territory size to these territories. The average start date of territory determination for passerines was 18 June and 9 June in 2018 and 2019, respectively, and for shorebirds 19 June and 15 June in 2018 and 2019, respectively.

Densities of territorial males for the four study species combined (Table 2) ranged among plots from 56.1–104.5 territories/km^2. Lapland Longspur were the most abundant species in the plots, followed by the two shorebird species, and then Horned Lark. Deterrents did not reduce the density of territorial birds within the plots. There was no significant interaction between year and treatment for the model including all study species together ($F_{2,20}$ = 0.54, p = 0.59). However, there was a significant increase in the densities of territorial males between 2018 and 2019 for all treatments ($F_{1,20}$ = 4.58, p = 0.04), with the cold and late snowmelt year of 2018 having a lower density of birds than in 2019 (average air temperature, 1 June to 10 June, in 2018: -1.35 °C; in 2019: 1.99 °C).

Densities of shorebirds averaged between 8.2–23.8 territories per km^2 (Table 2). Although average shorebird densities increased by 65% between 2018 and 2019 in the high-intensity treatment, and decreased in the controls by 8%, there was no significant interaction between year and treatment for densities of shorebirds (Table 2). Lapland Longspur territory densities ranged from 41.4–76.7 territories per km^2, also exhibiting an 42% increase in the high-intensity treatment and a 13% increase in the control but with no significant interaction between year and treatment (Table 2). There was no significant difference in the territory size of Lapland

Table 2. Mean density per plot of territorial males of the four study species combined (Lapland Longspur, *Calcarius lapponicus*, Horned Lark, *Eremophila alpestris*, Semipalmated Sandpiper, *Calidris pusilla*, and Least Sandpiper, *Calidris minutilla*), two shorebird species, and individually for Lapland Longspur and Horned Lark, in the control and treatment plots between years, pre-deterrents in 2018 and post-deterrents in 2019 from plots located along Amaruq Road, Nunavut. The significance of the interaction term between year and treatment (*df*, *F*-value, and *p*-value), our primary test of deterrent efficacy, is displayed.

Species	Treatment	2018 (territories/ km² ± SE)	2019 (territories/ km² ± SE)	Year*Treatment		
				df	*F*	*p*
All species combined	Control	56.1 ± 14.9	64.0 ± 8.7	2,20	0.54	0.59
	High-intensity treatment	67.5 ± 13.7	104.5 ± 15.2			
	Low-intensity treatment	70.8 ± 5.4	77.7 ± 10.1			
Shorebird species	Control	11.4 ± 5.5	10.5 ± 4.7	2,20	0.27	0.77
	High-intensity treatment	8.2 ± 3.5	23.8 ± 8.2			
	Low-intensity treatment	9.3 ± 4.1	14.3 ± 11.1			
Lapland Longspur	Control	41.4 ± 7.8	47.4 ± 9.6	2,24	0.70	0.51
	High-intensity treatment	44.1 ± 7.9	76.7 ± 10.3			
	Low-intensity treatment	49.2 ± 4.9	52.1 ± 6.6			
Horned Lark	Control	3.2 ± 3.2	6.2 ± 3.1	2,20	5.17	0.01
	High-intensity treatment	15.2 ± 7.1	3.9 ± 2.5			
	Low-intensity treatment	12.3 ± 3.7	11.1 ± 3.5			

Longspur between treatment and control plots within the experimental year (t = 0.81, p = 0.42; mean relative territory size (± SD) of Lapland Longspurs was 3935 ± 3772 m² in the control plots and 5358 ± 7501 m²in the treatment plots.

Horned Lark ranged from 3.2–15.2 territories per km² among plots (Table 2). For this species, there was a significant interaction between year and treatment (Table 2), with a significant reduction in densities of territorial male Horned Larks in high-intensity treatment plots between years, after deterrents were applied (t = -2.98, p = 0.007). Relative territory density of Horned Lark males was reduced by 74% in 2019 relative to the pre-treatment year 2018 (Table 2). However, average densities were low for Horned Lark with about one territory per plot.

Nest success

During the two years of the study, we found and monitored a total of 145 nests (2018 = 72; 2019 = 73), of which 125 were from our 4 focal species. The average nest initiation date for the four focal species was 18 June in 2018 and 15 June in 2019, whereas the average date for deterrent deployment was 12 June in 2019, with full deployment completed over the period from 6 June to 17 June. At the plot level, our estimates of timing of nest initiation and deterrent deployment suggested that 79% of nests in low-intensity treatment plots and 92% of nests in high-intensity treatment plots were initiated after the deterrents were deployed in respective plots.

Analyses of daily nest survival rates included data from 77 passerine nests (Lapland Longspur, n = 64; Horned Lark, n = 13). Of these, 45 nests fledged (58% passerine apparent nest success), with 4 known abandonments (12% of failed passerine nests) and 16 known cases of predation (50% of failed passerine nests). For shorebirds, 20 out of 27 nests (Semipalmated Sandpiper, n = 23; and Least Sandpiper, n = 4) hatched (74% shorebird apparent nest success), with no known abandonments and 7 known cases of predation. In control plots, 1 of 3 shorebird nests in 2018 (33.3%) and 0 of 4 shorebird nests (0%) in 2019 failed. In comparison, in treatment plots, 2 of 7 nests in 2018 (28%) and 4 of 13 nests in 2019 (15%) failed (Fisher's exact test: p = 0.63).

Neither treatment, nor their interaction predicted daily nest survival rates of passerines. However, year, season-date (date) and quadratic season-date (date²) were included in the top models explaining daily nest survival rates (Table 3). Only date and date² parameter estimates had confidence intervals that did not overlap 0 (Table 4). Passerine daily nest survival rates in both years had a similar pattern, with nests experiencing the lowest daily survival rates across years on day 23 (Fig. 3).

Table 3. Model selection results of daily nest survival rate (DSR) of passerine species (total passerine, n = 77; Lapland Longspur, *Calcarius lapponicus*, n = 64; Horned Lark, *Eremophila alpestris*, n = 13) located within the plots along Amaruq Road, Nunavut. Model is explained by year, date, and date² covariates ranked by Akaike's information criterion (AIC_c). Year indicates before (2018) and after (2019) treatment. Treatment indicates the three levels of treatment deployed in the plots (high intensity, low intensity, and control).

Daily nest survival models	K	ΔAIC_c	AIC_c weight	Dev
Year + Date + Date²	4	0.00	0.82	165.86
Treatment + Date + Date²	5	3.45	0.15	167.28
Treatment*Year + Date + Date²	8	6.37	0.03	164.11

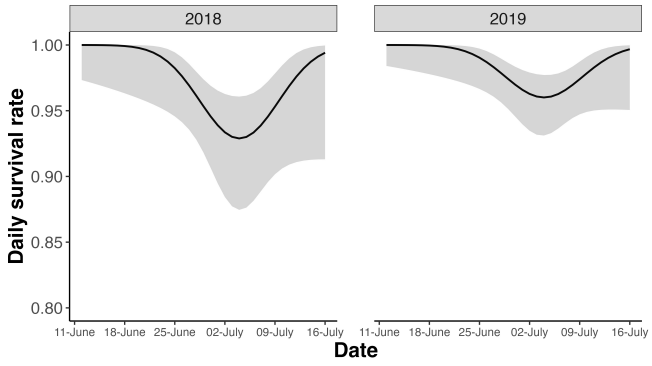
Table 4. Model parameter estimates (± SE) and 95% confidence intervals (95% CI) of the top model for daily nest survival of passerines (total passerine, n = 77; Lapland Longspur, *Calcarius lapponicus*, n = 64; Horned Lark, *Eremophila alpestris*, n = 13), across years (2018 and 2019) and dates within plots located along Amaruq Road, Nunavut.

Model variable	Estimate ± SE	CI 95%
Intercept	11.22	3.59, 18.85
Year	0.61	-0.11, 1.33
Date	-0.78	-1.52, -0.05
Date²	0.02	0.00, 0.03

Incubation behavior

We ran 11 model variations for both response variables: proportion of time spent off the nest or the number of off-bouts per 12-hr period. Our top model for proportion of time spent off the nest per 12-hr period included time of day (Table 5), with time of day and nest age (stage in the incubation cycle) in the second-best model (ΔAIC_c*** < 2; Table 5). The top model for number of off-bouts per 12-hr period included time of day and average temperature (Table 5). Therefore, we conclude that treatment did not significantly influence either response variable based on our top models (Table 5). There was a significant effect of time of day (day vs. night) on both metrics (Fig. 4; the proportion of time spent off the nest per 12-hr period, t = -18.20, p = < 0.0000000000000002, number of off-bouts per 12 hr period, t

Fig. 3. Estimated daily survival of passerine (total passerine, *n* = 77; Lapland Longspur, *Calcarius lapponicus*, *n* = 64; Horned Lark, *Eremophila alpestris*, *n* = 13) nests located within plots along Amaruq Road, Nunavut between years (2018 = before treatment, 2019 = after treatment). Date indicates the day and month. Shaded areas indicate 95% CI.



= -9.67, p = 0.000000000000002) with birds spending more time off the nest during the day. Nest age also had a significant negative influence on the proportion of time spent off the nest per 12-hr period (t = -3.52, p = 0.00053), but not on the number off-bouts per 12-hr period (Fig. 4). Additionally, average temperature had a significant positive influence on the number of off-bouts per 12-hr period (t = 4.25, p = < 0.00004).

Costs of deterrent deployment and maintenance

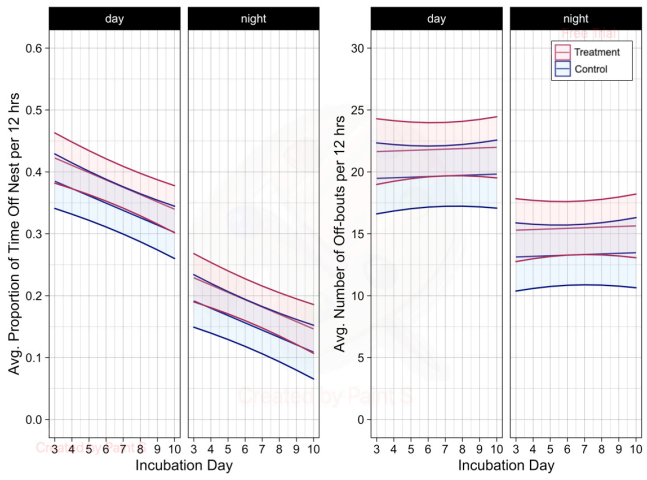
Deterrents took a total of 200 person hours to deploy in the 10 6-ha treatment plots, plus an additional 120 person hours to assemble and troubleshoot prior to deployment (Table 6). For example, a crew of 6–8 people spent 4 hr deploying the flash tape grid within a single high-intensity treatment, 6-ha plot. Deterrent maintenance was done every 4 days, ranging from 30 min to 4 hr per plot, depending on damage and needs. Examples of maintenance included ensuring that the hawk-kite effigy poles were erect and that the kite was still intact, ensuring the fishing line holding together the flash tape grid was taut, and ensuring flash tape was not tangled around hummocks or vegetation. In some cases, deterrents were destroyed, taking hours to fix or were unable to be repaired. For example, in one instance the flash tape grid was dismantled likely due to disturbance by barren-ground caribou (*Rangifer tarandus groenlandicus*) or muskoxen (*Ovibos moschatus*), causing the entire grid to collapse and requiring a full, new deployment. This re-deployment took hours and demonstrated a possible risk to mid-size to large Arctic mammals that may have become entangled or injured in the flash tape grid.

Financial costs (all reported in 2019 in Canadian dollars) for audio and visual deterrents and accessories (Table 6), included the Bird-X Super Bird X-peller Pro audio units costing $510 each, with 10 purchased in 2019. This cost included audio chips for each audio unit ($60 each). To keep batteries charged so the audio deterrents would run 24 hr a day for 6 weeks, we purchased 10 solar panels, $90 each. The 12-v batteries used to run audio

Table 5. Model selection results of incubation behavior analysis of Lapland Longspur (*Calcarius lapponicus*) nesting in plots along Amaruq Road, Nunavut. Model selection results are split into proportion of time off nest and number of off-bouts, explained by treatment use, temporal, and abiotic covariates ranked by Akaike's information criterion corrected for small sample size (AIC_c) for 20 nests. The table includes the top five candidate models for each response variable. Models were considered competitive when ΔAICc < 2.

Incubation behavior models	K	ΔAIC_c	AIC_c weight	Dev
Proportion of time of nest (%)				
% ~ Time of day	4	0.00	0.69	234.23
% ~ Time of day + Incubation day	5	1.89	0.27	234.34
% ~ Treatment + Time of day	5	5.57	0.04	232.50
% ~ Time of day + Average temperature	5	12.37	0.00	229.10
% ~ Treatment + Time of day + Average temperature + Incubation day	7	16.44	0.00	229.19
Number of off-bouts (#)				
# ~ Time of day + Average temperature	5	0.00	0.77	-612.28
# ~ Treatment + Time of day + Average temperature + Incubation day	7	2.50	0.22	-611.40
# ~ Treatment + Time of day	5	11.33	0.00	-617.85
# ~ Time of day	4	12.38	0.00	-619.52
# ~ Time of day + Incubation day	5	13.45	0.00	-619.01

Fig. 4. Predicted values from a mixed-effects model of Lapland Longspur (*Calcarius lapponicus*) incubation behavior for successful nests located within plots along Amaruq Road, Nunavut, with 95% confidence intervals, for proportion of time off nest and count of off-bouts per 12-hour period, split between day and night, comparing nests within treatment (n = 10; red line and fill) and control (n = 10; blue line and fill) over the incubation period from day 3 to 10.



deterrents and hold the solar panel charge cost $55 per battery (10 batteries, $550.00). Visual deterrent costs came to a total of $5131, with Hawk-Kite effigies costing $525 for 12 Hawk-Kites, with fiber glass poles (10) totaling $517 and replacement strings (7) $42. Flash tape rolls were $5.40 per roll, totaling $1917 for 355 rolls. Fishing line used to string the flash tape grid together, cost

$850 for 34 rolls of 100-lb Hercules PE braided fishing line 4 strands. Finally, the aluminum angle stakes used to erect the flash tape grid, with 640 pieces of 1-m long angles, cost $1280. The complete cost of purchasing deterrents and their accessories (without labor) was $11,731.

DISCUSSION

We found little evidence that deterrents were effective at dissuading the most abundant species of Arctic-nesting birds in our study plots. The only exception was Horned Lark for which there was a reduction in densities in the plots with deterrents between years. Whether examining factors operating during settlement and territory establishment, once nesting had been initiated (e.g., nest behavior), or reproductive success, we found few responses to our auditory and visual deterrent combinations. Lapland Longspurs that nested within the deterrent treatment plots did not exhibit a greater frequency of incubation off-bouts than birds who were not exposed to deterrents, and there were no impacts of deterrents on daily nest survival rates.

Other studies have demonstrated measurable effects of deterrents (Marcus et al. 2007, McGowan et al. 2019). However, the study species in these experiments (Common Tern, *Sterna hirundo* and Least Tern, *Sternula antillarum*) rely on active nest defense (Coulson 2002). In contrast, our study species more often rely on concealment and cryptic behavior to avoid predation, using their plumage as camouflage to avoid being detected (Caro 2005, Ruiz-Rodríguez et al. 2013). For example, Lapland Longspur sit on their nests until human observers are within 5 m before flushing (G. Holmes, *personal observation*). Semipalmated and Least Sandpipers both rely on vegetation over their nests to conceal their presence (Cunningham et al. 2016), although once flushed, they both sometimes exhibit conspicuous "rodent-run" behaviors to distract potential predators away from the nest site (Ashkenazie and Safriel 1979). It is possible that more aggressive species that use active forms of nest defense, such as terns and gulls, may be more responsive to predators, and therefore more likely to respond to artificially elevated predation risk mimicked by deterrents. These interspecific differences in anti-predator behaviors may explain why we saw so little response to deterrents in our study species.

Deterrent impact on relative territory densities

Arctic-nesting species have meaningful nesting-site fidelity, returning to the same territories year after year (Gratto et al. 1985, Craig et al. 2015), and sometimes even the same nest cups (Herzog et al. 2018), potentially making it difficult to deter birds from occupying a territory that is habitually theirs. In a separate study in the same study area (S. Bonnett, *personal communication*), we found 7 out of 54 individuals of 4 species that we banded in 2018 returned to nest in the study area in 2019 (Lapland Longspur: 1 male, Semipalmated Sandpiper: 5 unknown sex, Least Sandpiper: 1 unknown sex). In four of six of the cases for shorebird species, birds nested in the same nest cup in both years. The single resighted Lapland Longspur male had also returned to the same territory in both years. Although weather effects in 2018 versus 2019 complicate interpretation of site fidelity in our small sample of resighting data, high site fidelity could potentially limit birds' responsiveness to deterrents. Whatever the causes, we directly observed birds' unwillingness to abandon their territories and nest sites because of deterrents. As additional evidence for this, we observed five Lapland Longspur nests where flash tape extended directly over the nest cups (Fig. 5). Horned Larks showed a significant reduction in relative territory density between years because of treatment use. However, Horned Larks are the least common passerine with an average of less than one pair per plot. Deterrents in theory should apply to the most common species to be effective in minimizing incidental take. Despite this apparent unresponsiveness to deterrents by shorebirds and Lapland Longspurs, we acknowledge that our study on territory densities, which treated the plot as the experimental unit ($n = 15$), may have lacked statistical power to detect differences. Variation in territory density across plots and years could have obscured the effects of treatment if they were subtle.

Table 6. Breakdown of deployment (person hours), maintenance (person hours per 4 days), and total cost ($ CAD) per deterrent and treatment type from experimental plots located along Amaruq Road, Nunavut.

Deterrent type	Treatment	Deployment (total person hours)	Maintenance (person hours per 4 days)	Total cost ($ CAD)
Flash Tape Grid (20 x 20 m)	High-intensity treatment $n = 5$	140–160	2.5–20	4047
Audio Deterrents	High- and low-intensity treatment $n = 10$	40	5	6600
Hawk Kite Effigy	High- and low-intensity treatment $n = 10$	5	5	1084

Fig. 5. A concealed Lapland Longspur (*Calcarius lapponicus*) nest located within a high-intensity treatment plot along Amaruq Road, Nunavut. The nest is shown with a single piece of flash tape draped over it, which is how it was found.



Deterrent impact on daily nest survival

Deterrents did not impact daily nest survival rates or apparent survival of either passerines or shorebirds, indicating that despite the deterrents, birds that bred were still successful. As found in

many other studies of factors influencing nest survival in passerines (Grant et al. 2005), date was a predictor of daily survival rate of the nests of passerines. Daily nest survival rates for passerines were highest in the early and late-breeding season, and lowest mid-season. The low daily nest survival rate for passerines mid-season aligned with egg hatching and the beginning of feeding of nestlings, a period that often coincides with the highest rates of predation (Grant et al. 2005). As in other studies of nest survival in Arctic-nesting birds (Lecomte et al. 2008, Flemming et al. 2019), we also found that predation was the major cause of nest failure.

Temporal constraints on nesting could also limit birds' responsiveness to deterrents. Arctic-nesting birds must contend with a short breeding season by synchronizing their arrival and nest initiation with the relevant ecological processes of the Arctic if they are to breed successfully (Smith et al. 2010). Due to a short breeding season, there are few opportunities to re-nest and therefore birds must compensate by increasing investment in a single brood (Badyaev and Ghalambor 2001, Klaassen et al. 2006, Camfield 2008). Furthermore, breeding must be timed such that hatch coincides with insect emergence, to maximize chick growth (Liebezeit et al. 2014). Such temporal and ecological constraints may also explain the general lack of response from Arctic-nesting species to deterrents.

Deterrent impact on incubation behavior

Incubation behavior of female Lapland Longspur nesting in treatment plots was not different from those nesting in control plots. This indicates that audio and visual deterrents did not cause significant disturbance to incubation patterns of Lapland Longspur females. Other factors can influence length or duration of incubation recesses, but we controlled for these factors in our analysis. For example, we found that proportion of time off the nest for Lapland Longspurs decreased with incubation day, while the number of off-bouts stayed the same, in both treatment and control plots. A decrease in proportion of time off nest as incubation period advances is consistent with incubation behavior of other ground-nesting birds such as Horned Lark (Camfield and Martin 2009) and White-tailed Ptarmigan (*Lagopus leucura*; Wiebe and Martin 1997) and could be used as a tactic to avoid being detected by predators (Meyer et al. 2020) or to avoid chilling of the eggs (Olson et al. 2006). Time of day had the greatest influence on incubation behavior for both length and duration of incubation recesses, with fewer and short lengths of off-bouts occurring at night compared to during the day, despite the 24-h daylight in our study area. This pattern has been observed in other studies of Arctic birds, in which high activity of predators and low availability of surface-active arthropods at night make it less profitable to leave the nest at night versus during the day (Smith et al. 2012). Additionally, fewer off-bouts and more time on the nest in the colder hours of the Arctic day (i.e., night) could reduce chilling of developing embryos and is consistent with pronounced circadian cycles in the incubation scheduling of several other uniparentally incubating Arctic-breeding birds (Cartar and Montgomerie 1985, Steiger et al. 2013).

Deterrent outcomes and recommendations

We deployed deterrents as early in the season as was practical. Although our deterrents were in place before nests were established, territories may have already been established in some cases, given that we observed territorial males singing during deployment. Deploying deterrents in Arctic environments before territories are established may be more effective but is logistically challenging. This would require erecting deterrents during late winter and early spring, when the ground is still frozen and snow is present on the landscape, because most Arctic-nesting birds start to breed in available snow-free places as the land emerges (Liebezeit et al. 2014). These wintery conditions made it difficult to travel with equipment on foot, and frozen ground would make it difficult to hammer stakes into the ground and ensure that audio deterrent speakers stay upright. The use of snowmobiles could facilitate travel but would require additional costs and bring additional disturbance. Although sturdier stakes could have been employed (e.g., rebar), use of this much heavier material would have greatly increased both costs of transport and physical effort.

During the experiment, there were a few instances in which deterrents were damaged or destroyed, probably by mammals. In some plots where we found Arctic ground squirrels (*Urocitellus parryii*) or Arctic hare (*Lepus arcticus*), we anticipated there might be some damage to the wires associated with the audio deterrent units. Damage by Arctic ground squirrels occurred on one occasion when a speaker cord was chewed but quickly replaced thereafter. Of greater concern may be the impacts of deterrents on large ungulate species, such as ground-barren caribou and muskoxen, where deterrents could have caused harm through entanglement. There were multiple occasions during which visual deterrents were destroyed by caribou or muskoxen walking through the treatment plots, causing aluminum poles to be ripped out of the ground and carried away.

The cost of deterrents was on the low end of the scale compared to deterrents in other studies (Ronconi et al. 2004). Options that might have been more effective, include trained domestic dogs (Ball 2000) or radar-activated on-demand deterrence systems (Ronconi et al. 2004). However, deployment and maintenance of deterrents used here were time-consuming and required many person hours. Ultimately, the cost and labor of deterrents were not justifiable given the outcome of our experiment because three of four of our study species of Arctic-nesting birds were not successfully deterred from nesting, and the fourth (Horned Lark) only moderately.

Although incidental take is often accepted as an avoidable environmental cost for resource extraction (CWS 2014), this is nevertheless prohibited under the Migratory Birds Convention Act (MCBA 1994), and industry must make every effort to minimize, track, and report these losses. We demonstrated that traditional deterrent methods vary in their utility, depending on both species and context. Through further research efforts such as this, it is imperative that industry devises ways to reduce their impact on the natural world, including impacts on the countless populations of migratory birds already facing staggering losses across North America (Rosenberg et al. 2019).

Acknowledgments:

This work was funded by Agnico Eagle Mines Ltd. and Environment and Climate Change Canada. Further funding was provided by Mitacs, ArcticNet, Weston Family Foundation, and Queen

Elizabeth II Scholarships. We extend our special thanks to all field technicians and Agnico Eagle Mines Ltd. support staff.

LITERATURE CITED

Agnico Eagle Mines Ltd. 2024. Meadowbank Complex, north of Baker Lake, Kivalliq District, Nunavut Territory, Canada. Agnico Eagle Mines Ltd., Toronto, Ontario, Canada. https://www.agnicoeagle.com/English/operations/operations/meadowbank/default.aspx

Akaike, H. 1973. Information theory and an extension of the maximum likelihood principle. Pages 267–281 in B. N. Petrov and F. Csaki, editors. Second International Symposium on Information Theory. Akademiai Kiado, Budapest, Hungary.

Arbo, P., A. Iversen, M. Knol, T. Ringholm, and G. Sander. 2012. Arctic future: conceptualizations and images of a changing Arctic. Polar Geography 36:163–182. https://doi.org/10.1080/1088937X.2012.724462

Arctic Monitoring and Assessment Programme (AMAP). 2017. Adaptation actions for a changing Arctic (AACA) - Baffin Bay/Davis Strait region overview report. Arctic Monitoring and Assessment Programme, Oslo, Norway. https://www.amap.no/documents/doc/adaptation-actions-for-a-changing-arctic-aaca-baffin-bay-davis-strait-region-overview-report/1530

Ashkenazie, S., and U. N. Safriel. 1979. Breeding cycle and behavior of the Semipalmated Sandpiper at Barrow, Alaska. Auk 96:56–67. https://doi.org/10.1093/auk/96.1.56

Badyaev, A. V., and C. K. Ghalambor. 2001. Evolution of life histories along elevational gradients: trade-off between parental care and fecundity. Ecology 82:2984-2960. https://doi.org/10.1890/0012-9658(2001)082[2948:EOLHAE]2.0.CO;2

Ball, D. 2000. Wildlife control at Vancouver international airport: introducing border collies. Bird Strike Committee-USA/Canada, 2nd joint annual meeting. Minneapolis, Minnesota, USA. https://digitalcommons.unl.edu/birdstrike2000/26

Bates, D., M. Mächler, B. Bolker, and S. Walker. 2015. Fitting linear mixed effects models using lme4. Journal of Statistical Software 67(1). https://doi.org/10.18637/jss.v067.i01

Belayneh, A., T. Rodon, and S. Schott. 2018. Mining economies: Inuit business development and employment in the eastern subarctic. Northern Review 47:59–78. https://doi.org/10.22584/nr47.2018.004

Bernath-Plaisted, J., and N. Koper. 2016. Physical footprint of oil and gas infrastructure, not anthropogenic noise, reduces nesting success of some grassland songbirds. Biological Conservation 204:434–441. https://doi.org/10.1016/j.biocon.2016.11.002

Bernauer, W. 2019. The limits to extraction: mining and colonialism in Nunavut. Canadian Journal of Development Studies/Revue canadienne d'études du développement 40(3):404–422. https://doi.org/10.1080/02255189.2019.1629883

Boag, D. A., and V. Lewin. 1980. Effectiveness of three waterfowl deterrents on natural and polluted ponds. Journal of Wildlife Management 44:145–154. https://doi.org/10.2307/3808360

Bol, L., O. Curran, L. Ainsworth, A. Buchan, and G. Sharam. 2018. Long-term monitoring finds no effect of an Arctic mine on migratory birds. TALK. Environmental Monitoring and Research. https://www.nwtgeoscience.ca/forum/session/long-term-monitoring-finds-no-effect-Arctic-mine-migratory-birds

Burnham, K. P., D. R. Anderson, and K. P. Huyvaert. 2011. AIC model selection and multimodel inference in behavioral ecology: some background, observations, and comparisons. Behavioral Ecology and Sociobiology 65:23–35. https://doi.org/10.1007/s00265-010-1029-6

Calenge, C. 2006. The package "adehabitat" for the R software: a tool for the analysis of space and habitat use by animals. Ecological Modelling 197:516–519. https://doi.org/10.1016/j.ecolmodel.2006.03.017

Cameron, E., and T. Levitan. 2014. Impact and benefit agreements and the neoliberalization of resource governance and Indigenous-state relations in northern Canada. Studies in Political Economy 93:25–52. https://doi.org/10.1080/19187033.-2014.11674963

Camfield, A. F. 2008. Life history tradeoffs, behavior and conservation of Horned Larks (*Eremophila alpestris*). Dissertation. University of British Columbia, Vancouver, British Columbia, Canada. https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0066698

Camfield, A. F., and K. Martin. 2009. The influence of ambient temperature on Horned Lark incubation behaviour in an alpine environment. Behaviour 146:1615–1633. https://doi.org/10.1163/156853909X463335

Camfield, A. F., S. F. Pearson, and K. Martin. 2010. Life history variation between high and low elevation subspecies of Horned Larks *Eremophila* spp. Journal of Avian Biology 41:273–281. https://doi.org/10.1111/j.1600-048X.2009.04816.x

Campbell, M. W., J. G. Shaw, and C. A. Blyth. 2012. Kivalliq ecological land classification map atlas: a wildlife perspective. Section 2.Government of Nunavut, Department of Environment. Technical Report Series #1-2012. https://www.gov.nu.ca/sites/default/files/publications/2022-01/kivalliq_ecological_land_classification_map_atlas_section_2.pdf

Canadian Wildlife Service (CWS). 2014. Incidental take of migratory birds in Canada. Environment Canada, Ottawa, Ontario, Canada. https://www.ceaa-acee.gc.ca/050/documents/p80054/121249E.pdf

Cartar, R. V., and R. D. Montgomerie. 1985. The influence of weather on incubation scheduling of the White-rumped Sandpiper (*Calidris fuscicollis*): a uniparental incubator in a cold environment. Behaviour 95:261–289. https://doi.org/10.1163/156853985X00154

Caro, T. 2005 Antipredator defenses in birds and mammals. University of Chicago Press, Chicago, Illinois, USA.

Cooper, C. B., and H. Mills. 2005. New software for quantifying incubation behavior from times-series recordings. Journal of Field Ornithology 76:352–356. https://doi.org/10.1648/0273-8570-76.4.352

Coulson, J. C. 2002. Colonial breeding in seabirds. Pages 87–113 in E. A. Schreiber, and J. Burger, editors. Biology of marine birds. CRC Press LLC, Boca Raton, Florida, USA.

Craig, H. R., S. Kendall, T. Wild, and A. N. Powell. 2015. Dispersal and survival of a polygynandrous passerine. Auk 132:916–925. https://doi.org/10.1642/AUK-15-41.1

Cunningham, J. A., D. C. Kesler, and R. B. Lanctot. 2016. Habitat and social factors influence nest-site selection in Arctic-breeding shorebirds. Auk 133:364–377. https://doi.org/10.1642/AUK-15-196.1

Dinsmore, S. J., and J. J. Dinsmore. 2007. Modeling avian nest survival in program MARK. Studies in Avian Biology 34:73–83.

Ferrari, M. C. O., A. Gonzalo, F. Messier, and D. P. Chivers. 2007. Generalization of learned predator recognition: an experimental test and framework for future studies. Proceedings of the Royal Society B: Biological Sciences 274:1853–1859. https://doi.org/10.1098/rspb.2007.0297

Flemming, S. A., E. Nol, L. V. Kennedy, A. Bédard, M.-A. Giroux, and P. A. Smith. 2019. Spatio-temporal responses of predators to hyperabundant geese affect risk of predation for sympatric-nesting species. PLoS ONE 14:e0221727. https://doi.org/10.1371/journal.pone.0221727

Fromberger, M. A., A. J. Campomizzi, Z. M. Lebrun-Southcott, A. L. Pintaric, N. M. MacDonald, and E. Nol. 2020. Factors affecting Bobolink nest survival across grassland types. Avian Conservation and Ecology 15(2):13. https://doi.org/10.5751/ACE-01666-150213

Gajera, N. B., A. K. R. Mahato, and V. V. Kumar. 2013. Status, distribution, and diversity of birds in mining environment of Kachchh, Gujarat. International Journal of Biodiversity 1:471618. https://doi.org/10.1155/2013/471618

Government of Canada. 2020. Sunrise/sunset (full year, civil twilight) for Baker Lake NU for 2019. National Research Council Canada, Ottawa, Ontario, Canada. https://nrc.canada.ca/en/research-development/products-services/software-applications/sun-calculator/

Grabowski, M. M., F. L. Doyle, D. G. Reid, D. Mossop, and D. Talarico. 2013. Do Arctic-nesting birds respond to earlier snowmelt? A multi-species study in north Yukon, Canada. Polar Biology 36:1097–1105. https://doi.org/10.1007/s00300-013-1332-6

Grant, T. A., T. L. Shaffer, E. M. Madden, and P. J. Pietz. 2005. Time-specific variation in passerine nest survival: new insights into old questions. Auk 122:661–672. https://doi.org/10.1093/auk/122.2.661

Gratto, C. L., R. I. G. Morrison, and F. Cooke. 1985. Philopatry, site tenacity, and mate fidelity in the Semipalmated Sandpiper. Auk 102:16–24. https://doi.org/10.2307/4086818

Gratto-Trevor, C. L. 1996. Use of Landsat TM imagery in determining important shorebird habitat in the outer Mackenzie Delta, Northwest Territories. Arctic 49:11–22. https://doi.org/10.14430/arctic1179

Haenel, G. J., L. C. Smith, and H. B. John-Alder. 2003. Home-range analysis in *Sceloporus undulatus* (eastern fence lizard). I. Spacing patterns and the context of territorial behavior. Copeia 2003:99–112. https://doi.org/10.1643/0045-8511(2003)003[0099:HRAISU]2.0.CO;2

Herzog, P., S. T. Saalfield, H.-H. Kaatz, and R. B. Lanctot. 2018. Nest reuse in Arctic-breeding shorebirds: an analysis of potential benefits and factors affecting the occurrence of this rare behavior. Journal of Avian Biology 49:e01737. https://doi.org/10.1111/jav.01737

Holmes, G. I. 2022. Assessing and mitigating the impacts of mining-induced flooding on Arctic-nesting birds. Thesis. Trent University, Peterborough, Ontario, Canada.

Hurvich, C. M., and C.-L. Tsai. 1991. Bias of the corrected AIC criterion for underfitted regression and time series models. Biometrika 78:499–509. https://doi.org/10.1093/biomet/78.3.499

Joyce, E. M., T. S. Sillett, and R. T. Holmes. 2001. An inexpensive method for quantifying incubation patterns of open-cup nesting birds, with data for Black-throated Blue Warbler. Journal of Field Ornithology 72:369–379. https://doi.org/10.1648/0273-8570-72.3.369

Klaassen, M., K. F. Abraham, R. L. Jefferies, and M. Vrtiska. 2006. Factors affecting the site of investment, and the reliance on savings for Arctic breeders: the capital-income dichotomy revisited. Ardea 94:371–384. http://hdl.handle.net/10536/DRO/DU:30035109

Kondratiev, V. B. 2020. Mineral resources and future of the Arctic. Russian Mining Industry 1:87–96. https://doi.org/10.30686/160-9-9192-2020-1-87-96

Kruk, M., M. A. W. Noordervliet, and W. J. ter Keurs. 1997. Survival of Black-tailed Godwit chicks *Limosa limosa* in intensively exploited grassland areas in the Netherlands. Biological Conservation 80:127–133. https://doi.org/10.1016/S0006-3207(96)00131-0

Kuznetsova, A., P. B. Brockhoff, and R. H. B. Christensen. 2016. lmerTest: tests in linear mixed effects models. R package version 2.0-33. R Foundation for Statistical Computing, Vienna, Austria. https://doi.org/10.32614/CRAN.package.lmerTest

Laake, J. L. 2013. RMark: an R interface for analysis of capture-recapture data with MARK. Alaska Fisheries Science Center, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Seattle, Washington, USA. https://repository.library.noaa.gov/view/noaa/4372

Lecomte, N., V. Careau, G. Gauthier, and J.-F. Giroux. 2008. Predator behaviour and predation risk in heterogeneous Arctic environment. Journal of Animal Ecology 77:439–447. https://doi.org/10.1111/j.1365-2656.2008.01354.x

Liebezeit, J. R., K. E. B. Gurney, M. Budde, S. Zack, and D. Ward. 2014. Phenological advancement in Arctic bird species: relative importance of snow melt and ecological factors. Polar Biology 37:1309–1320. https://doi.org/10.1007/s00300-014-1522-x

Liebezeit, J. R., P. A. Smith, R. B. Lanctot, H. Schekkerman, I. Tulp, S. J. Kendall, D. Tracy, R. J. Rodrigues, H. Meltofte, J. A. R. Robinson, C. Gratto-Trevor, B. J. McCaffery, J. Morse, and S. W. Zack. 2007. Assessing the development of shorebird eggs using the flotation method: species-specific and generalized regression models. Condor 109:32–47. https://doi.org/10.1093/condor/109.1.32

Ludlow, S. M., and S. K. Davis. 2018. Oil and natural gas development influence nest-site selection and nest survival of upland-nesting waterfowl and shorebirds. Wildlife Society Bulletin 42:57–66. https://doi.org/10.1002/wsb.849

Mabee, T. J., A. M. Wildman, and C. B. Johnson. 2006. Using egg flotation and eggshell evidence to determine age and fate of Arctic shorebird nests. Journal of Field Ornithology 77:163–172. https://doi.org/10.1111/j.1557-9263.2006.00037.x

MacDonald, E., A. F. Camfield, J. E. Jankowski, and K. Martin. 2013. Extended incubation recesses by alpine-breeding Horned Larks: a strategy for dealing with inclement weather? Journal of Field Ornithology 84:58–68. https://doi.org/10.1111/jofo.12006

Male, S. K., and E. Nol. 2005. Impacts of roads associated with the Ekati Diamond Mine™, Northwest Territories, Canada, on reproductive success and breeding habitat of Lapland Longspurs. Canadian Journal of Zoology 83:1286–1296. https://doi.org/10.1139/z05-128

Marcus, J. F., J. J. Dinan, R. J. Johnson, E. E. Blankenship, and J. L. Lackey. 2007. Directing nest site selection of Least Terns and Piping Plovers. Waterbirds 30:251–258. https://doi.org/10.1675/1524-4695(2007)30[251:DNSSOL]2.0.CO;2

Mayfield, H. 1961. Nesting success calculated from exposure. Wilson Bulletin 73:255–261.

McGowan, P. C., J. D. Sullivan, C. R. Callahan, W. Schultz, J. L. Wall, and D. J. Prosser. 2019. Promoting change in Common tern (*Sterna hirundo*) nest site selection to minimize construction related disturbance. Ecological Restoration 37:143–147. https://doi.org/10.3368/er.37.3.143

Merondon, A. L., A. Albert, H. Vitsy, and G. Sharam. 2024. Proximity to infrastructure and ecotype influence breeding bird abundance at an Arctic mine, the Hope Bay Project, Nunavut, Canada. Polar Biology 47:475–486. https://doi.org/10.1007/s00300-024-03244-x

Meyer, N., L. Bollache, F. X. Dechaume-Moncharmont, J. Moreau, E. Afonso, A. Angerbjörn, J. Bêty, D. Ehrich, V. Gilg, M.-A. Giroux, J. Hansen, R. B. Lanctot, J. Lang, N. Lecomte, L. McKinnon, J. Reneerkens, S. T. Saalfield, B. Sabard, N. M. Schmidt, B. Sittler, P. A. Smith, A. Sokolov, V. Sokolov, N. Sokolova, R. van Bemmelen, and O. Gilg. 2020. Nest attentiveness drives nest predation in Arctic sandpipers. Oikos 129:1481–1492. https://doi.org/10.1111/oik.07311

Olson, C. R., C. M. Vleck, and D. Vleck. 2006. Periodic cooling of bird eggs reduces embryonic growth efficiency. Physiology and Biochemical Zoology 79:927–935. https://doi.org/10.1086/506003

Parliament of Canada, House of Commons. 1994. Migratory Birds Convention Act (1994. S. C. 1994, c. 22.). Government of Canada, Ottawa, Ontario, Canada. https://laws-lois.justice.gc.ca/eng/acts/m-7.01/

Pebesma, E. 2018. Simple features for R: standardized support for spatial sector data. R Journal 10:439–446. https://doi.org/10.32614/RJ-2018-009

Pirie, L. D., C. M. Francis, and V. H. Johnston. 2009. Evaluating the potential impact of a gas pipeline on Whimbrel breeding habitat in the Outer Mackenzie Delta, Northwest Territories. Avian Conservation and Ecology 4(2):2. https://doi.org/10.5751%2FACE-00298-040202

Racca, R. G. 2005. Testing acoustic fish deterrents for use under-ice in Arctic lakes. Journal of the Acoustical Society of America 117:2253–2554. https://doi.org/10.1121/1.4788496

Ricklefs, R. E., and J. Brawn. 2012. Nest attentiveness in several neotropical suboscine passerine birds with long incubation periods. Journal of Ornithology 154:145–154. https://doi.org/10.1007/s10336-012-0880-9

Ronconi, R. A., and C. C. St. Clair. 2006. Efficacy of a radar-activated on-demand system for deterrent waterfowl from oil sands tailings ponds. Journal of Applied Ecology 43:111–119. https://doi.org/10.1111/j.1365-2664.2005.01121.x

Ronconi, R. A., C. C. St. Clair, P. D. O'Hara, and A. E. Burger. 2004. Waterbird deterrence at oil spills and other hazardous sites: potential applications of a radar-activated on-demand deterrence system. Marine Ornithology 32:25–33. http://www.marineornithology.org/content/get.cgi?rn=594

Rosenburg, K. V., A. M. Dokter, P. J. Blancher, J. R. Sauer, A. C. Smith, P. A. Smith, J. C. Stanton, A. Panjabi, L. Helft, M. Parr, and P. P. Marra. 2019. Decline in North American avifauna. Science 366:120–124. https://doi.org/10.1126/science.aaw1313

RStudio Team. 2020. RStudio: integrated development for R. RStudio, PBC, Boston, Massachusetts, USA. http://www.rstudio.com/

Ruiz-Rodríguez, M., J. M. Avilés, J. J. Cuervo, D. Parejo, F. Ruano, C. Zamora-Muñoz, F. Sergio, L. López-Jiménez, A. Tanferna, and M. Martín-Vivaldi. 2013. Does avian conspicuous colouration increase or reduce predation risk? Oecologia 173:83–93. https://doi.org/10.1007/s00442-013-2599-6

Schlichting, P. E., A. E. Holland, J. C. Beasley, A. L. Bryan, R. A. Kennamer, T. L. DeVault, B. F. Blackwell, and O. E. Rhodes, Jr. 2017. Efficacy of an acoustic hailing device as an avian dispersal tool. Wildlife Bulletin 41:453-460. https://doi.org/10.1002/wsb.797

Schneider, E. G., and S. R. McWilliams. 2007. Using nest temperature to estimate nest attendance of Piping Plovers. Journal of Wildlife Management 71:1998–2006. https://doi.org/10.2193/2007-007

Smith, P. A., S. A. Dauncey, H. G. Gilchrist, and M. R. Forbes. 2012. The influence of weather on shorebird incubation. Pages 89–104 in C. A. Ribic, F. R. Thompson, III, and P. J. Pietz, editors. Video surveillance of nesting birds. Studies in Avian Biology No. 43. University of California Press, Berkeley, California, USA. https://doi.org/10.1525/california/9780520273139.003.0008

Smith, P. A., G. Gilchrist, M. R. Forbes, J.-L. Martin, and K. Allard. 2010. Inter-annual variation in the breeding chronology of Arctic shorebirds: effects of weather, snow melt and predators. Journal of Avian Biology 41:292–304. https://doi.org/10.1111/j.1600-048X.2009.04815.x

Smith, A. C., J. A. Virgl, D. Panayi, and A. R. Armstrong. 2005. Effects of diamond mine on tundra-breeding birds. Arctic 58:295–304. https://doi.org/10.14430/arctic431

Smokorowski, K. E., and R. G. Randall. 2017. Cautions on using the before-after-control-impact design in environmental effects monitoring programs. FACETS 2:212–232. https://doi.org/10.1139/facets-2016-0058

Steiger, S. S., M. Valcu, K. Spoelstra, B. Helm, M. Wikelski, and B. Kempenaers. 2013. When the sun never sets: diverse activity rhythms under continuous daylight in free-living Arctic-breeding birds. Proceedings of the Royal Society B: Biological Sciences 280 (1764). https://doi.org/10.1098/rspb.2013.1016

Tolvanen, A., P. Eilu, A. Juutinen, K. Kangas, M. Kivinen, M. Markovaara-Koivisto, A. Naskali, V. Salokannel, S. Tuulentie, and J. Similä. 2019. Mining in the Arctic environment - a review from ecological, socioeconomic and legal perspectives. Journal of Environmental Management 233:832–844. https://doi.org/10.1016/j.jenvman.2018.11.124

Umlah, K. 1996. Testing red paint as a deterrent to Arctic Terns (*Sterna paradisaea*) on roads: a case study in Bolungarvik, Iceland. Thesis. University Centre of the Westfjords, Ísafjörður, Iceland. http://hdl.handle.net/1946/34027

Van Wilgenburg, S. L., K. A. Hobson, E. M. Bayne, and N. Koper. 2013. Estimated avian nest loss associated with oil and gas exploration and extraction in the Western Canadian Sedimentary Basin. Avian Conservation and Ecology 8(2):9. https://doi.org/10.5751/ACE-00585-080209

Wiebe, K. L., and K. Martin. 1997. Effects of predation, body condition, and temperature on incubation rhythms of White-tailed Ptarmigan *Lagopus leucurus*. Wildlife Biology 3:219–227. https://doi.org/10.2981/wlb.1997.027

Wiebe, K. L., and K. Martin. 1998. Costs and benefits of nest cover for ptarmigan: changes within and between years. Animal Behaviour 56:1137–1144. https://doi.org/10.1006/anbe.1998.0862

Wilson, R. R., J. R. Liebezeit, and W. M. Loya. 2013. Accounting for uncertainty in oil and gas development impacts to wildlife in Alaska. Conservation Letters 6:350–358. https://doi.org/10.1111/conl.12016

Editor-in-Chief: Alexander L. Bond
Subject Editor: Dave Shutler

Sponsored by the Society of Canadian Ornithologists and Birds Canada

Parrainée par la Société des ornithologistes du Canada et Oiseaux Canada

APPENDIX I

Meadowbank Bird Surveys Report



MEADOWBANK COMPLEX

FINAL

2024 BREEDING BIRD SURVEYS AND PRISM PLOTS SUMMARY REPORT

13 DECEMBER 2024 V2

Table of Contents

SECTION 1 • OVERVIEW 4

SECTION 2 • OBJECTIVES 5

SECTION 3 • METHODOLOGY 6

3.1 Breeding Bird Surveys (BBS) 6
3.2 PRISM Plots 6

SECTION 4 • 2024 BIRD SURVEY RESULTS 12

4.1 Breeding Bird Surveys (BBS) 12
4.2 PRISM Plots 14

SECTION 5 • RECOMMENDATIONS 20

SECTION 6 • LITERATURE CITED 21

List of Tables

Table 4.1:	Breeding Bird Survey (BBS) 2024 Fieldwork Dates for Meadowbank All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) Routes.	12
Table 4.2:	Breeding Bird Survey (BBS) 2023 and 2024 Results for Meadowbank All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) Routes. Numbers are cumulative across all 50 survey points.	13
Table 4.3:	Meadowbank and Whale Tail PRISM Plot 2024 Fieldwork Dates.	15
Table 4.4:	Details and Representative Photos of Nests Found during 2024 PRISM Plots.	16
Table 4.5:	Wildlife Species Observed on Meadowbank PRISM Plots in 2024. Additional Species Observed outside Plots are Listed as Incidental. Species only Observed Incidentally are in Gray.	18

List of Figures

Figure 3.1	Location of the Breeding Bird Survey (BBS) Route Along the Meadowbank All-Weather Access Road (AWAR).	8
Figure 3.2	Location of the Breeding Bird Survey (BBS) Route Along the Whale Tail Haul Road (WTHR).	9
Figure 3.3:	Location of PRISM Plots at the Meadowbank Site.	10
Figure 3.4:	Location of PRISM Plots at the Whale Tail Site.	11

List of Appendices

Appendix I:	2024 PRISM Bird Nest Summary.	22

SECTION 1 • OVERVIEW

Environmental baseline studies were conducted in the Project area prior to Meadowbank Mine approvals and integrated into Project designs according to the Terrestrial Ecosystem Management Plan (TEMP). Wildlife Valued Ecosystem Components (VECs) for the Meadowbank Complex were identified in consultation with regulatory agencies and Baker Lake residents. Upland Breeding Birds was one of the key terrestrial VECs determined for the Meadowbank Mine; therefore, an extensive bird monitoring program, consisting of Program for Regional and International Shorebird Monitoring (PRISM) plots at the mine site and a reference area, and bird transects along the Meadowbank All-Weather Access Road (AWAR), was established to determine potential effects of the Meadowbank Mine. The breeding bird PRISM plot and bird transect monitoring programs were designed to evaluate potential Project-related changes in breeding bird species abundance, richness, and diversity over time.

In 2020, Agnico Eagle sent Environment and Climate Change Canada (ECCC) the comprehensive 2003-2015 analysis of all PRISM and breeding bird transect data. Results of the comprehensive analysis determined there were no significant effects of the Project or Mine-related infrastructure on bird abundance, diversity, or community composition, which supported that mitigation is effective. In 2022, Agnico Eagle Meadowbank Complex finalized a collaboration agreement with ECCC, with a focus on contributing to regional bird monitoring programs. The agreement includes a commitment to conduct 48 PRISM plots selected by Canadian Wildlife Service (CWS) over 10 years (2021 to 2031), and to complete Breeding Bird Survey (BBS) routes along the Meadowbank AWAR and the Whale Tail Haul Road (WTHR) opportunistically when qualified individuals are on site. At a minimum, BBS routes will be conducted every three (3) years during the operations, closure, and post-closure phases of the Project.

In 2022, two BBS routes, consisting of 50 stations each, were established along the AWAR and the WTHR. As well, four (4) of 48 designated PRISM plots were surveyed at Meadowbank site. In 2023, both BBS routes were surveyed, and 17 PRISM plots were completed at the Meadowbank site, while in 2024, both BBS routes were surveyed, and 13 PRISM plots were completed at the Meadowbank and Whale Tail sites. The total number of PRISM plots completed to date is 34 (14 plots remaining – all at Whale Tail).

SECTION 2 • OBJECTIVES

The primary objectives of this report are to:

1) Provide a brief overview of the Meadowbank Complex and the rationale for breeding bird surveys;
2) Describe the methods used to conduct BBS and PRISM surveys;
3) Summarize results of the 2024 BBS and PRISM surveys; and
4) Make recommendations for surveys in subsequent years.

SECTION 3 • METHODOLOGY

3.1 BREEDING BIRD SURVEYS (BBS)

Breeding Bird Survey (BBS) route stops were established in accordance with the North American BBS methods provided by CWS. These methods are coordinated by the United States Geological Survey's (USGS) Patuxent Wildlife Research Center in partnership with ECCC, CWS, and Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO, Mexico).

The BBS protocol consists of 50 survey stations set every 800 m for a total of 40 km along the Meadowbank AWAR (Route 62049) and 40 km along the Whale Tail Haul Road (Route 62091). The starting points and orientation of BBS routes along the AWAR and WTHR were chosen by ECCC personnel in early 2022 (see **Figures 3.1** and **3.2**). Stations were established by field personnel on 15 June 2022, and GPS coordinates and detailed descriptions of each station were recorded. The route and stations are a permanent survey to be conducted on a schedule provided by ECCC (i.e., at a minimum every three years during operations, closure, and post-closure, and opportunistically when PRISM surveys are conducted). The first and second years of BBS surveys (i.e., 2023 and 2024) were scheduled between 15 and 30 June, the prime bird breeding season.

Only one observer counted birds from each stationary point. Every bird seen or heard within 400 m was tallied during the designated three minutes at each stop. Birds documented beyond three minutes were not recorded. Birds seen between or before stops were not counted but were noted in the margin of the datasheet. The number of individuals in large flocks was estimated. Birds known to be non-breeding (late migrant, injured bird, or summer vagrant) were included but marked on the data sheet as a non-breeder (Mig). Species not already listed on the forms were added at the bottom. As well, the number of vehicles that passed by during each three-minute stop, excessive noise, and weather conditions were recorded.

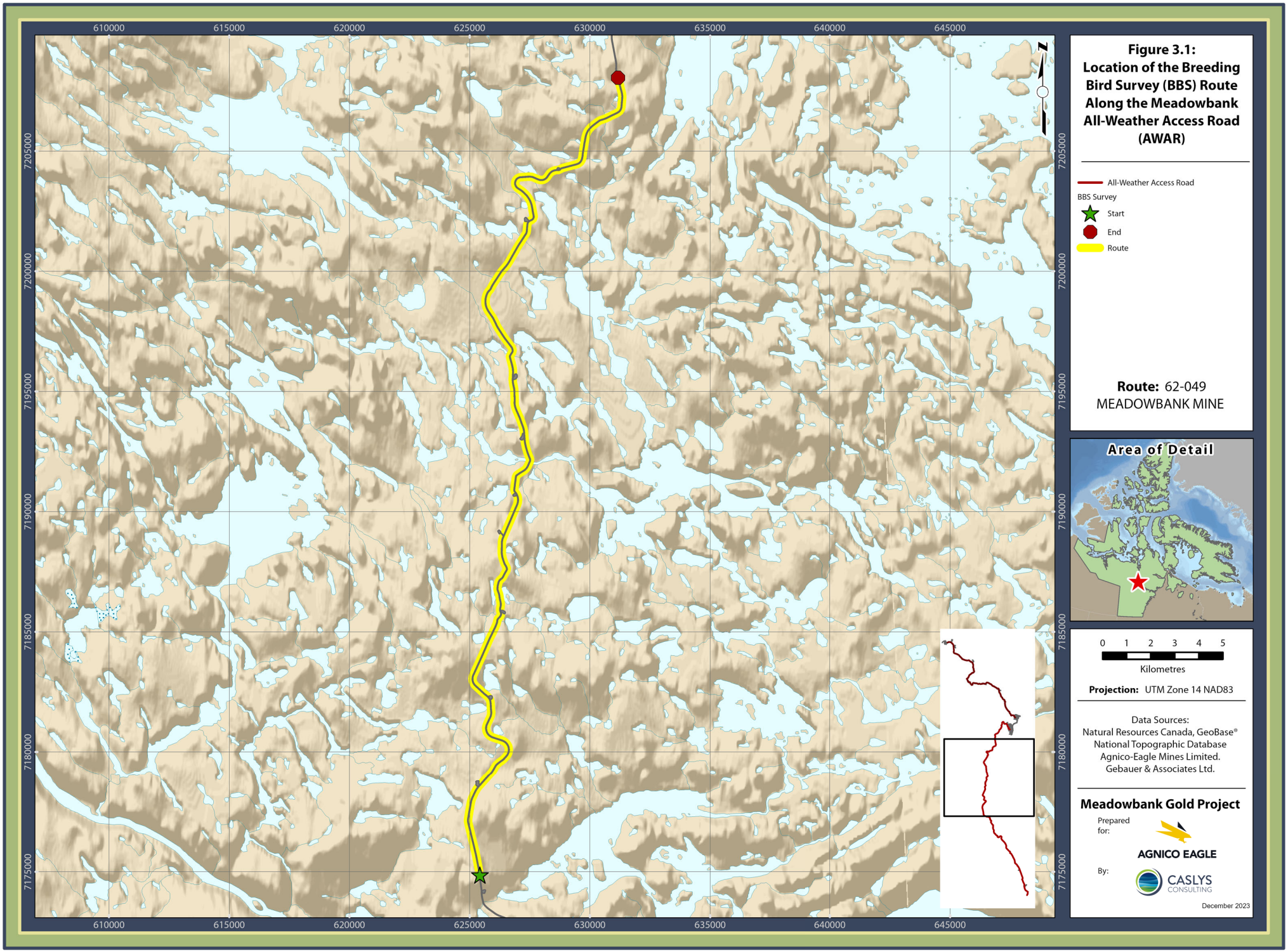
The BBS data were entered directly into the USGS system and copies of the datasheet were provided to the ECCC CWS BSS Coordinator by August 31, 2024. Valid stop descriptions of each stop along both routes were maintained and kept up to date in the USGS database. Agnico Eagle will notify the Canadian national BBS office if adjustments to stop locations are necessary due to safety issues.

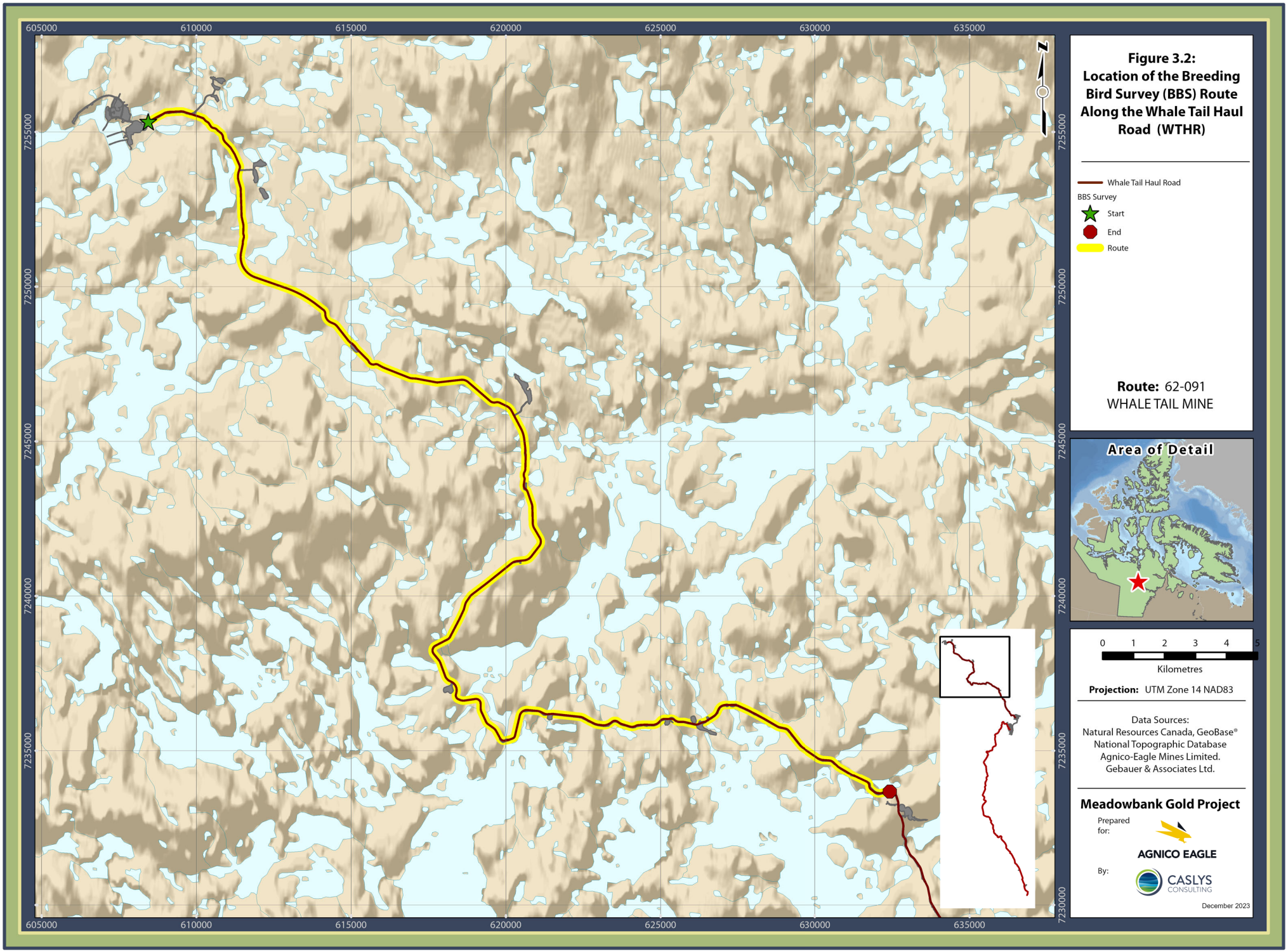
3.2 PRISM PLOTS

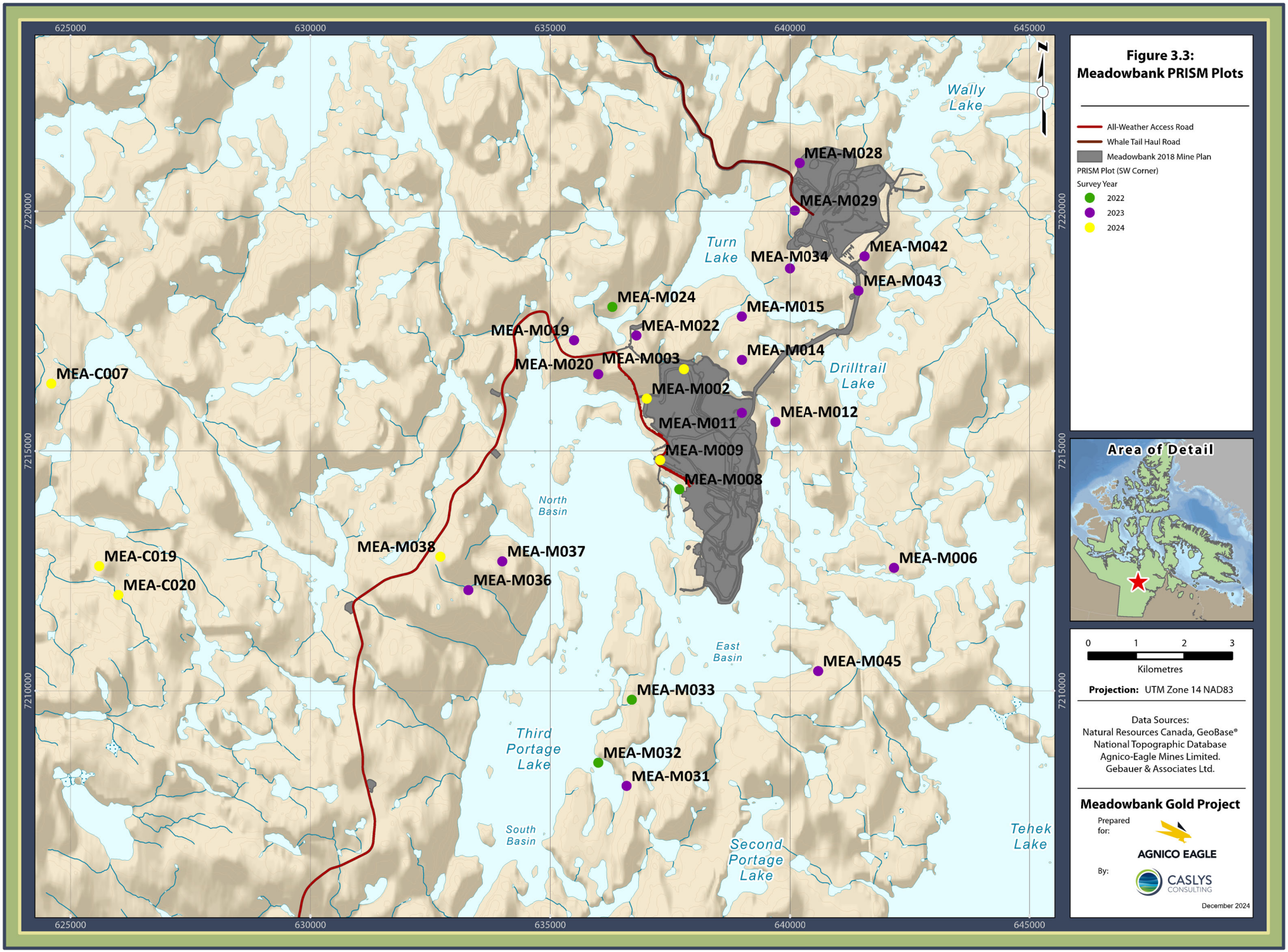
The PRISM plot surveys followed ECCC protocols (Bart et al. 2005) in compliance with the Meadowbank-ECCC Collaboration Agreement. A total of 48 plots were chosen by ECCC in early 2022, many of which were previously established at Meadowbank and Whale Tail (see **Figures 3.3** and **3.4**). Four (4) plots were surveyed in 2022, 17 plots were surveyed in 2023, and 13 plots were surveyed in 2024. The remaining 14 plots will likely be surveyed in 2025 or other years prior to the expected mine closure date, although the option exists to survey some or all remaining plots each year. Plots are chosen each year depending on access logistics (e.g., helicopter support), proximity to other PRISM plots, local weather conditions, and ECCC priority.

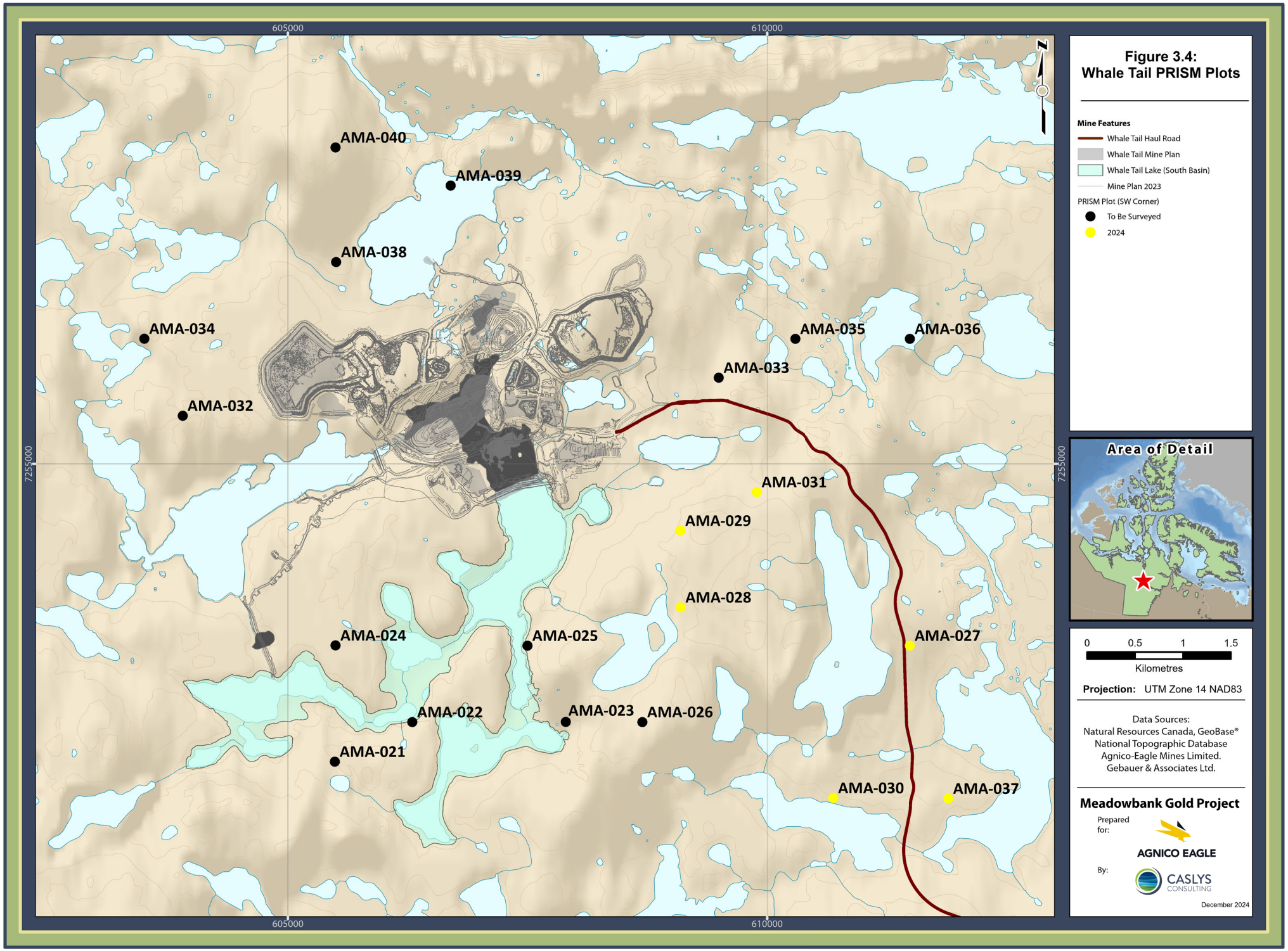
In 2022, 2023, and 2024, the 300x400m plots were surveyed by a team of two field qualified personnel that transected the site every 25 m (team members were spaced 25 m apart and used geolocation to orient along transect lines). The purpose of the surveys was to document all birds (i.e., absolute abundance) on the plots and to contribute to the ECCC Arctic database on bird diversity and abundance.

PRISM survey raw data will be provided to ECCC CWS technical expert and the CWS Environmental Assessment Officer every year by March 31. Raw data will include: a) bird and plot habitat data entered into the CWS provided spreadsheet; and b) a digital scan of all field data sheets. Photos of PRISM plot corners were also taken.


610000
615000
620000
625000
630000
635000
640000
645000
7205000
7200000
7195000
7190000
7185000
7180000
7175000
N
Figure 3.1:
Location of the Breeding Bird Survey (BBS) Route Along the Meadowbank All-Weather Access Road (AWAR)
All-Weather Access Road
BBS Survey
Start
End
Route
Route: 62-049
MEADOWBANK MINE
Area of Detail
0 1 2 3 4 5
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
December 2023


605000
610000
615000
620000
625000
630000
635000
7255000
7250000
7245000
7240000
7235000
7230000
N
Figure 3.2:
Location of the Breeding Bird Survey (BBS) Route Along the Whale Tail Haul Road (WTHR)
Whale Tail Haul Road
BBS Survey
Start
End
Route
Route: 62-091
WHALE TAIL MINE
Area of Detail
0 1 2 3 4 5
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
December 2023


625000
630000
635000
640000
645000
7220000
7215000
7210000
N
Wally Lake
Turn Lake
Drilltrail Lake
North Basin
East Basin
Third Portage Lake
South Basin
Second Portage Lake
Tehek Lake
MEA-M028
MEA-M029
MEA-M042
MEA-M034
MEA-M043
MEA-M024
MEA-M015
MEA-M022
MEA-M019
MEA-M014
MEA-M020
MEA-M003
MEA-C007
MEA-M002
MEA-M012
MEA-M011
MEA-M009
MEA-M008
MEA-M038
MEA-M037
MEA-M006
MEA-C019
MEA-C020
MEA-M036
MEA-M045
MEA-M033
MEA-M032
MEA-M031
Figure 3.3:
Meadowbank PRISM Plots
All-Weather Access Road
Whale Tail Haul Road
Meadowbank 2018 Mine Plan
PRISM Plot (SW Corner)
Survey Year
2022
2023
2024
Area of Detail
0
1
2
3
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
December 2024


605000
610000
7255000
AMA-040
AMA-039
AMA-038
AMA-034
AMA-035
AMA-036
AMA-033
AMA-032
AMA-031
AMA-029
AMA-028
AMA-024
AMA-025
AMA-027
AMA-022
AMA-023
AMA-026
AMA-021
AMA-030
AMA-037
N
Figure 3.4:
Whale Tail PRISM Plots
Mine Features
Whale Tail Haul Road
Whale Tail Mine Plan
Whale Tail Lake (South Basin)
Mine Plan 2023
PRISM Plot (SW Corner)
To Be Surveyed
2024
Area of Detail
0
0.5
1
1.5
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING
December 2024

SECTION 4 • 2024 BIRD SURVEY RESULTS

4.1 BREEDING BIRD SURVEYS (BBS)

The Meadowbank AWAR (62049) and WTHR (62091) routes were completed in 2024 (see **Table 4.1** for survey timing, **Figures 3.1** and **3.2** for general BBS locations).

Table 4.1: Breeding Bird Survey (BBS) 2024 Fieldwork Dates for Meadowbank All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) Routes.

Date & Time	Weather	Observers	Fieldwork Type
Meadowbank All-Weather Access Road (BBS Route 62049)			
June 15, 2024 03:30 to 08:02	Start: 3ºC, cloudy, light breeze End: 6ºC, cloudy, light breeze	Lars Qaqqaq Dylan White	BBS route station survey
Whale Tail Haul Road (BBS Route 62091)			
June 16, 2024 03:30 to 08:04	Start: 4ºC, partly cloudy, light air End: 8ºC, clear, light air	Lars Qaqqaq Dylan White	BBS route station survey

A total of 23 bird species were recorded on the Meadowbank AWAR route in 2024. The five most common bird species were Lapland Longspur (171; cumulative number), Horned Lark (81), White-crowned Sparrow (45), Redpoll sp. (39), and Willow Ptarmigan (35). Mammal species recorded incidentally included Arctic Hare, Arctic Fox, Arctic Ground Squirrel, Caribou, and Muskox. **Table 4.2** summarizes BBS results for the Meadowbank AWAR route.

A total number of 25 bird species were recorded on the WTHR route in 2024. The five most common bird species were Lapland Longspur (156; cumulative number), Horned Lark (58), Rock Ptarmigan (38), Canada Goose (33), and White-crowned Sparrow (33). Mammal species recorded incidentally included Caribou, and Muskox. **Table 4.2** summarizes BBS results for the WTHR route.

BBS data were entered and submitted into the USGS system in August 2024 and copies of the datasheet were provided by email to ECCC CWS BSS Coordinator by 31 August 2024. Valid stop descriptions of each stop along both routes were also maintained in the USGS database and no adjustments to stop locations were needed for the 2024 surveys along both AWAR and WTHR.

Table 4.2: Breeding Bird Survey (BBS) 2023 and 2024 Results for Meadowbank All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) Routes. Numbers are cumulative across all 50 survey points.

Common Name	Scientific Name	AWAR		WTHR	
		2023	2024	2023	2024
BIRDS					
American Golden Plover	*Pluvialis dominica*	1	1		
American Pipit	*Anthus rubescens*	1		4	4
American Robin	*Turdus migratorius*		1		1
Bald Eagle	*Haliaeetus leucocephalus*	1		1	
Canada Goose	*Branta canadensis*	106	31	51	33
Common Loon	*Gavia immer*	5	1	1	
Common Merganser	*Mergus merganser*		2		
Common Raven	*Corvus corax*	6	5	2	2
Greater Scaup	*Aythya marila*	6	4		
Green-winged Teal	*Anas crecca*				1
Harris's Sparrow	*Zonotrichia querula*		1		2
Herring Gull	*Larus argentatus*	23	10	4	5
Horned Lark	*Eremophila alpestris*	113	81	81	58
Lapland Longspur	*Calcarius lapponicus*	200	171	142	156
Least Sandpiper	*Calidris minutilla*		3	3	5
Lesser Yellowlegs	*Tringa flavipes*				1
Long-tailed Duck	*Clangula hyemalis*	12	9	5	2
Northern Pintail	*Anas acuta*		8		2
Parasitic Jaeger	*Stercorarius parasiticus*		1		
Peregrine Falcon	*Falco peregrinus*	2	1		
Redpoll sp.	*Acanthis* sp.	31	39	18	27
Red-breasted Merganser	*Mergus serrator*			2	1
Red-necked Phalarope	*Phalaropus lobatus*	1			
Red-throated Loon	*Gavia stellata*			2	2
Rock Ptarmigan	*Lagopus muta*	2	11	16	38
Rough-legged Hawk	*Buteo lagopus*	2			
Sandhill Crane	*Grus canadensis*	34			4
Savannah Sparrow	*Passerculus sandwichensis*	52	32	32	13
Semipalmated Plover	*Charadrius semipalmatus*	1			4
Semipalmated Sandpiper	*Calidris pusilla*	11	24	13	12

Table 4.2: Continued.

Common Name	Scientific Name	AWAR		WTHR	
		2023	2024	2023	2024
BIRDS					
Snow Goose	*Anser caerulescens*	4	2	1	10
Tundra Swan	*Cygnus columbianus*				1
White-crowned Sparrow	*Zonotrichia leucophrys*	33	45	14	33
Willow Ptarmigan	*Lagopus lagopus*	12	35	1	2
Wilson's Snipe	*Gallinago delicata*	2			
Total # of Species		**24**	**23**	**19**	**25**
MAMMALS					
Arctic Hare	*Lepus arcticus*	2	5	2	
Arctic Fox	*Vulpes lagopus*	4	1	1	
Arctic Ground Squirrel	*Spermophilus parryii*		2		
Barren-land Caribou	*Rangifer tarandus*	3	18	89	9
Muskox	*Ovibos moschatus*	2	1	16	36
Total # of Species		**4**	**5**	**4**	**2**

4.2 PRISM PLOTS

Thirteen (13) PRISM plots were surveyed in 2024 between June 15 and June 19: AMA-027, AMA-028, AMA-029, AMA-030, AMA-031, AMA-037, MEA-C007, MEA-C019, MEA-C020, MEA-M002, MEA-M003, MEA-M009, and MEA-M038 (see **Table 4.3** for timing and weather details, **Figures 3.3** and **3.4** for plot locations). The focus in 2024 was remaining PRISM plots around the Meadowbank Mine, because these were listed as being of higher priority by ECCC, and plots in the Whale Tail area.

Nests of Lapland Longspur (2 nests), Semipalmated Plover (2), Horned Lark (1), Redpoll sp. (1), and American Golden Plover (1) were documented on PRISM plots in 2024. Nest details and photos are provided in **Table 4.4** and **Appendix I**.

Table 4.3: Meadowbank PRISM Plot 2024 Fieldwork Details.

Plot (MEA)	Date	Time	Weather	Observers[1]
AMA-027	June 18	14:15 to 15:35	~11ºC, mostly cloudy, no precipitation, moderate breeze	LQ & DW
AMA-028	June 19	09:06 to 10:08	4ºC, cloudy, no precipitation, strong breeze	LQ & DW
AMA-029	June 19	10:50 to 12:00	~5ºC, mostly cloudy, no precipitation, fresh breeze	LQ & DW
AMA-030	June 18	09:05 to 10:10	~10ºC, mostly cloudy, no precipitation, fresh breeze	LQ & DW
AMA-031	June 19	12:50 to 14:00	~6ºC, mostly cloudy, no precipitation, moderate breeze	LQ & DW
AMA-037	June 18	07:20 to 09:08	9ºC, mostly cloudy, no precipitation, fresh breeze	LQ & DW
MEA-C007	June 16	12:15 to 13:40	NDºC, mainly clear, no precipitation, gentle breeze	LQ & DW
MEA-C019	June 15	13:48 to 15:20	12ºC, mainly clear, no precipitation, light breeze	LQ & DW
MEA-C020	June 15	11:40 to 13:20	10ºC, mostly cloudy, no precipitation, light breeze	LQ & DW
MEA-M002	June 17	10:50 to 11:53	~9ºC, cloudy, no precipitation, fresh breeze	LQ & DW
MEA-M003	June 17	13:40 to 14:55	11ºC, mostly cloudy, no precipitation, strong breeze	LQ & DW
MEA-M009	June 17	09:16 to 09:50	~8ºC, mostly cloudy, no precipitation, moderate breeze	LQ & DW
MEA-M038	June 17	07:20 to 08:30	8ºC, mostly cloudy, no precipitation, moderate breeze	LQ & DW

[1] LQ = Lars Qaqqaq; DW = Dylan White

Eighteen (18) bird and six (6) mammal species were observed during 2024 PRISM plot surveys (**Table 4.5**). Eight (8) of these (6 birds and 2 mammals) were only observed incidentally outside plots, while the other species were observed while surveying PRISM plots (**Table 4.5**). Species numbers, behaviours, nests, and other details have been recorded in the PRISM plot data spreadsheets as per the templates provided by CWS that will be provided to ECCC by March 31, 2025.

Table 4.4: Details and Representative Photos of Nests Found during 2024 PRISM Plots.

Date (2024)	Plot (MEA)	Nest Name	Species[1]	# of Eggs	UTM Coordinates (14W)	Details	Representative Photo
June 18	AMA-037	AMA-037_LALO	LALO	4	612072 7251739	On Heath Tundra under vegetation; female flushed and distraction display	
June 18	AMA-037	AMA-037_HOLA	HOLA	4	612005 7251620	On Shrub Tundra partially under vegetation; female flushed	
June 15	MEA-C019	MEA-C019_LALO	LALO	4	625728 7212930	On Heath Tundra partially under vegetation; male and female flushed and agitated	
June 15	MEA-C019 (outside plot)	MEA-C019_REDP	REDP	5	625903 7212210	On Shrub Tundra in Dwarf Birch	
June 15	MEA-C020	MEA-C020_AMGP	AMGP	4	626148 7212150	On Gravel Heath; adult with distraction display	

Table 4.4: Continued.

Date (2024)	Plot (MEA)	Nest Name	Species[1]	# of Eggs	UTM Coordinates (14W)	Details	Representative Photo
June 15	MEA-C020	MEA-C020_SEPL	SEPL	4	626200 7212320	On Gravel; adult with distraction display	
June 17	MEA-M003	MEA-M003_SEPL	SEPL	4	638012 7217049	On Heath Tundra; adult with distraction display	

[1] LALO = Lapland Longspur; HOLA = Horned Lark; REDP = Redpoll species; AMGP = American Golden Plover; SEPL = Semipalmated Plover

Table 4.5: Wildlife Species Observed on Meadowbank PRISM Plots in 2024. Additional Species Observed outside Plots are Listed as Incidental. Species only Observed Incidentally are in Gray.

Common Name	Scientific Name	AMA-0						MEA-C0			MEA-M0				Incidental (Plot #s)
		27	28	29	30	31	37	07	19	20	02	03	09	38	
BIRDS															
American Golden Plover	*Pluvialis dominica*									3					
American Pipit	*Anthus rubescens*									1		1	1		AMA-030, MEA-C020, MEA-M003
Canada Goose	*Branta canadensis*														AMA-028, AMA-030, AMA-031, MEA-C007, MEA-C020, MEA-M003, MEA-M038
Common Loon	*Gavia immer*														AMA-031
Herring Gull	*Larus argentatus*														AMA-029, AMA-031, MEA-C020, MEA-M003, MEA-M009
Horned Lark	*Eremophila alpestris*	1	3	5	1		5	3	4	4	5			4	AMA-028, AMA-029, MEA-C019, MEA-C020, MEA-M009
Lapland Longspur	*Calcarius lapponicus*	5	9	10	9	4	8	12	8	9	7	5	2	4	AMA-027, AMA-028, AMA-029, AMA-031, AMA-037, MEA-C007, MEA-M009
Least Sandpiper	*Calidris minutilla*	1											1		AMA-029
Northern Pintail	*Anas acuta*														MEA-M003
Parasitic Jaeger	*Stercorarius parasiticus*														MEA-C007
Redpoll sp.	*Acanthis sp.*	1		1	2	1	1	4	5	1					MEA-C019, MEA-C020
Rock Ptarmigan	*Lagopus muta*		1		1				2					1	MEA-C007, MEA-C020, MEA-M002, MEA-M038
Sandhill Crane	*Grus canadensis*														AMA-027
Savannah Sparrow	*Passerculus sandwichensis*	3	1			1	1	1	2	4		1	1		AMA-028, AMA-029, AMA-031, AMA-037, MEA-C007, MEA-C019, MEA-M002, MEA-M009

Table 4.5: Continued.

Common Name	Scientific Name	AMA-0						MEA-C0			MEA-M0				Incidental (Plot #s)
		27	28	29	30	31	37	07	19	20	02	03	09	38	
BIRDS															
Semipalmated Plover	*Charadrius semipalmatus*									2		2			MEA-M003
Semipalmated Sandpiper	*Calidris pusilla*	1			1		1		2	3	1	1	2		AMA-030, AMA-031
White-crowned Sparrow	*Zonotrichia leacophrys*							2				1	1		AMA-028, MEA-C020
Willow Ptarmigan	*Lagopus lagopus*							1	1	1					
Total # of Species		**6**	**4**	**3**	**5**	**3**	**5**	**6**	**7**	**9**	**3**	**6**	**6**	**3**	
MAMMALS															
Arctic Ground Squirrel	*Urocitellus parryii*								1		1				MEA-C007
Arctic Hare	*Lepus arcticus*								1						
Barren-ground Caribou	*Rangifer tarandus* ssp. *groenlandicus*														MEA-C020
Collared Lemming	*Dicrostonyx groenlandicus*					2									
Ermine	*Mustela erminea*								1						
Muskox	*Ovibos moschatus*														AMA-027, AMA-037

SECTION 5 • RECOMMENDATIONS

The remaining 14 PRISM plots need to be surveyed before mine closure with the BBS routes opportunistically conducted within the committed 3-year cycle. In 2025, PRISM and BBS surveys can be continued between June 15 and 30 as per the ECCC Agreement.

SECTION 6 • LITERATURE CITED

Bart, J., Andres, B., Brown, S., Donaldson, G., Harrington, B., Johnston, V., Jones, S., Morrison, G., and Skagen, S. 2005. The Program for Regional and International Shorebird Monitoring (PRISM). USDA Forest Service General Technical Report, PSW-GTR-191, 893-901.

Rausch, J., and Clyde, N. 2022. The Arctic PRISM Survey Details – For Agnico Eagle Crews to Meadowbank/Amaruq (part of Arctic PRISM Region 6.2).

APPENDIX I

2024 PRISM BIRD NEST SUMMARY

NEST INFORMATION – All Species **Site** Meadowbank & Amaruq **Year** 2024 **Page** 1 **of** 1

Plot Association	Nest ID	Date *dd/mm/yyyy*	Time *24hr format*	UTM Coordinates NAD83	Observer(s) *3-letter Initials*	Species *4-letter code*	# of Egg	# of Chick	Flush distance *(m)*	Nest Concealm't *% cover to nearest 5%*
plot ID AMA-037 ☐ no plot Location X inside ☐outside	AMA-037_LALO_Region6.2_2024_DylanWhite	18/06/2024	11:46	Zone 14W 612072E 7251739N	DW	LALO	4		ND	90
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 7								Comments	
plot ID AMA-037 ☐ no plot Location X inside ☐outside	AMA-037_HOLA_Region6.2_2024_DylanWhite	18/06/2024	11:29	Zone 14W 612005E 7251620N	DW	HOLA	4		ND	15
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 8								Comments	
plot ID MEA-C019 ☐ no plot Location X inside ☐outside	MEA-C019_LALO_Region6.2_2024_DylanWhite	15/06/2024	14:30	Zone 14W 625728E 7212930N	DW	LALO	4		ND	20
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 5								Comments	
plot ID MEA-C019 ☐ no plot Location ☐inside X outside	MEA-C019_REDP_Region6.2_2024_DylanWhite	15/06/2024	12:36	Zone 14W 625903E 7212210N	DW	REDP	5		ND	10
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 6								Comments	
plot ID MEA-C020 ☐ no plot Location X inside ☐outside	MEA-C020_AMGP_Region6.2_2024_DylanWhite	15/06/2024	12:38	Zone 14W 626148E 7212150N	DW	AMGP	4		ND	0
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 8								Comments	
plot ID MEA-C020 ☐ no plot Location X inside ☐outside	MEA-C020_SEPL_Region6.2_2024_DylanWhite	15/06/2024	12:21	Zone 14W 626200E 7212320N	DW	SEPL	4		ND	0
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 4								Comments Nest on gravel	
plot ID MEA-M003 ☐ no plot Location X inside ☐outside	MEA-M003_SEPL_Region6.2_2024_DylanWhite	17/06/2024	14:23	Zone 14W 638012E 7217049N	DW	SEPL	4		ND	0
Camera ID See Nest ID	Photo # (to track photos until they can be relabeled post-season) See Nest ID – Photos 1 to 5								Comments	

Flush distance: ☐ nest not disturbed ☐ flush not seen

APPENDIX J

Caribou Behaviour Monitoring

PREPARED FOR

AGNICO EAGLE

Meadowbank Mine

2024 Caribou Behaviour Study

DATE
March 2025

REFERENCE
0744508



SIGNATURE PAGE

Meadowbank Mine

2024 Caribou Behaviour Study

March 2025

Dylan Brassard, MSc, BIT
Wildlife Biologist

Mitch Fennell, MSc, RPBio
Senior Wildlife Biologist

Greg Sharam, PhD
Associate Partner

Craig Neufeld, BSc, PBiol
Partner in Charge

ERM Consultants Canada Ltd.
#1000 - 1100 Melville Street
Vancouver, BC
Canada V6E 4A6
T +1 604 689 9460
F +1 604 687 4277

© Copyright 2025 by The ERM International Group Limited and/or its affiliates ('ERM'). All Rights Reserved.
No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ER

CONTENTS

EXECUTIVE SUMMARY 1

1. PROJECT OVERVIEW 3

1.1 PROJECT TERMS AND CONDITIONS AND TERRESTRIAL ECOSYSTEM MANAGEMENT PLAN 3

2. STUDY OBJECTIVES 6

3. BACKGROUND 7

3.1 LORILLARD HERD 7

3.2 EXISTING CARIBOU MANAGEMENT MEASURES 7

3.3 TERRESTRIAL ADVISORY GROUP 7

4. STUDY AREA 9

5. METHODS 10

5.1 BEHAVIOUR SURVEYS 10

5.2 DATA ANALYSIS 11

6. RESULTS AND DISCUSSION 14

6.1 CARIBOU DISTRIBUTION RELATIVE TO THE MINE 14

6.2 CARIBOU BEHAVIOUR SURVEYS 14

6.3 EXPLORATORY ANALYSIS RESULTS 16

6.3.1 Comparing Road Crossings with Group Size and Distance to Infrastructure 17
6.3.2 Comparing Behaviour Type with Group Size and Distance to Infrastructure 17
6.3.3 Behaviour Type and Environmental/Temporal Variables 20
6.3.4 Road Closure Status 20
6.3.5 Season and Side of the Road (Upstream/Downstream) 20
6.3.6 Number of Disturbances 23
6.3.7 Response to Disturbances 23
6.3.8 Direction of Caribou Travel 27
6.3.9 Convoy Duration and Size 27

6.4 STATISTICAL ANALYSIS RESULTS 28

6.4.1 Model Formulation 28
6.4.2 Effect of Disturbances 32
6.4.3 Effect of Group Size 32
6.4.4 Effect of Road Closure Status 32
6.4.5 Effect of Season and Side of the Road (Upstream/Downstream) 35
6.4.6 Effect of Temperature 35
6.4.7 Duration of Response 35
6.4.8 Statistical Analysis Summary 37

7. SUMMARY 38

8. REFERENCES 40

APPENDIX A DETAILED METHODS FOR CARIBOU BEHAVIOUR SURVEYS
APPENDIX B MEADOWBANK COMPLEX CARIBOU BEHAVIOUR SURVEY DATA SUMMARY, 2020 TO 2024
APPENDIX C SUMMARY OF SPATIAL DISTRIBUTION OF SURVEY DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024
APPENDIX D DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024
APPENDIX E PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY

LIST OF TABLES

TABLE 6.2-1	CARIBOU BEHAVIOUR SURVEYS SEASONAL DISTRIBUTION, 2020 TO 2024	16
TABLE 6.2-2	MEADOWBANK COMPLEX CARIBOU BEHAVIOUR SURVEYS DATA SUMMARY, 2024	16
TABLE 6.2-3	SUMMARY OF SPATIAL DISTRIBUTION OF SURVEYS, 2024	16
TABLE 6.3-1	VEHICLE COMPOSITION OF CONVOYS IN 2024	27
TABLE 6.4-1	SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR THE FULL RESPONSE BEHAVIOUR MODEL	29
TABLE 6.4-2	SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR THE FULL RESPONSE BEHAVIOUR MODEL	30
TABLE 6.4-3	SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR WALKING MODEL	30
TABLE 6.4-4	SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR DURATION OF RESPONSE MODEL	31
TABLE 6.4-5	PROBABILITY OF RETURNING TO NORMAL BEHAVIOUR WITHIN A CERTAIN TIME BY GROUP SIZE AND NUMBER OF DISTURBANCES	37

LIST OF FIGURES

FIGURE 1-1	LOCATION OF MEADOWBANK MINE AND WHALE TAIL MINE	5
FIGURE 6.1-1	LOCATION OF BEHAVIOUR SURVEYS BY DATE	15
FIGURE 6.3-1	CARIBOU GROUP SIZE VERSUS DISTANCE FROM CARIBOU TO THE ROAD	18
FIGURE 6.3-2	AVERAGE PROPORTION OF EACH BEHAVIOUR TYPE OBSERVED	19
FIGURE 6.3-3	PROPORTION OF CARIBOU DISPLAYING RESPONSE BEHAVIOUR BY TEMPERATURE, WINDSPEED AND DATE	21
FIGURE 6.3-4	AVERAGE PROPORTION OF EACH BEHAVIOUR TYPE BY ROAD STATUS	22
FIGURE 6.3-5	AVERAGE PROPORTION OF EACH BEHAVIOUR TYPE OBSERVED ON THE EAST AND WEST SIDE OF THE ROAD	24
FIGURE 6.3-6	COMPARISON OF RESPONSE BEHAVIOURS BY NUMBER OF DISTURBANCES	25
FIGURE 6.3-7	PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – EXAMPLE SUBSET	26
FIGURE 6.4-1	PAIR WISE COMPARISONS OF AVERAGE PROPORTION OF CARIBOU EXHIBITING RESPONSE BEHAVIOUR AMONG CATEGORIES OF CARIBOU GROUP SIZE	33
FIGURE 6.4-2	PAIR WISE COMPARISONS OF AVERAGE PROPORTION OF CARIBOU EXHIBITING RESPONSE AND WALKING BEHAVIOUR AMONG CATEGORIES OF CARIBOU GROUP SIZE AND ROAD STATUS	34
FIGURE 6.4-3	CUMULATIVE PROBABILITY OF RETURN TO NORMAL BEHAVIOUR BY GROUP SIZE AND NUMBER OF DISTURBANCES	36

ACRONYMS AND ABBREVIATIONS

Acronym	Description
Agnico Eagle	Agnico Eagle Mines Limited
AIC	Akaike Information Criterion
ATV	All-Terrain Vehicle
AWAR	All Weather Access Road
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
GLMMs	Generalized Linear Mixed-Effects Models
GN	Government of Nunavut
GNWT ENR	Government of Northwest Territories Department of Environment and Natural Resources
IOL	Inuit Owned Land
KivIA	Kivalliq Inuit Association
km	Kilometre
km/hr	Speed expressed as kilometre per hour
m	Metre
NIRB	Nunavut Impact Review Board
Response Behaviour	"Alert" and "Trotting or Running" caribou behaviours
T&C	Terms and Conditions
The Mine	Meadowbank Mine & Whale Tail Mine
The Road	The All-Weather Access Road and Whale Tail Haul Road
TEMP	Meadowbank Mine Terrestrial Ecosystem Management Plan
WTHR	Whale Tail Haul Road

EXECUTIVE SUMMARY

The Meadowbank Complex (the Mine), owned and operated by Agnico Eagle Mines Limited (Agnico Eagle), is located on Inuit Owned Land (IOL) and includes the Meadowbank Mine approximately 90 km north of the Hamlet of Baker Lake, and the Whale Tail Mine located approximately 150 km north of Baker Lake. A 108 km All-Weather Access Road (AWAR) connects the Meadowbank Mine to Baker Lake, and the 72 km Whale Tail Haul Road (WTHR) connects the Meadowbank Mine to the Whale Tail Mine. During spring and fall migration, caribou from the Lorillard caribou herd, along with smaller numbers of Wager Bay and Ahiak caribou periodically cross through the Mine site, AWAR, and WTHR.

As part of the Nunavut Impact Review Board (NIRB) Project Certificates #004 and #008, Agnico Eagle is required to study and report on the effects of the Mine on caribou. The Agnico Eagle Terrestrial Ecosystem Management Plan (TEMP; Agnico Eagle 2020) outlines a behaviour monitoring program for caribou which have been conducted annually from 2020 through 2024. Agnico Eagle retained ERM Consultants Canada Ltd. (ERM) to update the field protocols used for behaviour monitoring in 2020 and support the reporting of the monitoring results.

A Terrestrial Advisory Group (TAG) was formed in 2019 as a collaborative forum to discuss Inuit Qaujimajatuqangit (IQ), Traditional Knowledge (TK), and western science applications to mitigation and monitoring programs related to caribou movement in proximity to the Mine. Caribou monitoring methods and analysis has been revised since 2019 to incorporate suggestions and recommendations of the TAG and the Kivalliq Inuit Association (KivIA).

Agnico Eagle environmental technicians, contractors, and Nunavummiut seasonal workers completed caribou behaviour monitoring surveys during the spring and fall migration periods, summer calving period, and winter period.

Behaviour monitoring data from 2024 was combined with data from 2020 through 2023 to include an analysis of temporal trends. The key findings from the 2024 program were similar to previous years and included:

- Caribou behaviours observed were predominantly non-response behaviors (i.e., standing, laying, feeding, and walking).
- Caribou group sizes ranged from 1-2 individuals to >100 individuals.
- Small groups of caribou (1-2 individuals) tended to have a higher proportion of response behaviours (trotting or running, alert) than larger groups, irrespective of disturbances.
- Observed caribou behaviour was not correlated with their distance to the road.
- Cox's proportional hazards modelling indicates that following a single disturbance 92% groups would return to baseline behaviour after six minutes, and 98% groups would return to baseline behaviour after 9 minutes.
- In response to comments from the KivIA in 2022, "walking" behaviour was investigated to determine if it could be considered a response behaviour instead of a non-response behaviour. In both 2023 and 2024 disturbances were found to statistically affect the proportion of

caribou walking. In both 2023 and 2024 disturbances were found to statistically increase the proportion of caribou walking.

- When large groups of caribou were present, the Roads were closed to non-essential Mine traffic. Closure of the roads followed a decision-making framework outlined in the Meadowbank Mine TEMP. Road closure status did not affect response behaviour, though the road being open was positively correlated with walking behaviour. This finding is consistent with that of the 2023 analysis.
- Groups of caribou were observed on both the east and west sides of the road in all seasons but were more commonly observed on the west side during spring migration and the east side during fall migration (i.e., upstream of the dominant direction of travel). The side of road where caribou were observed and season did not affect response behaviour, but that caribou were more likely to be walking on the upstream side of the road. The dominant behaviours on the downstream side were feeding or laying down.

1. PROJECT OVERVIEW

The Meadowbank Complex (the Mine), owned and operated by Agnico Eagle Mines Limited (Agnico Eagle), is located on Inuit Owned Land (IOL) and includes the Meadowbank Mine, and the Whale Tail Mine. The Meadowbank Mine, located in the Kivalliq Region of Nunavut (Figure 1-1), received a Project Certificate (#004) from the Nunavut Impact Review Board (NIRB) in 2006. The adjacent Whale Tail Mine received a Project Certificate (#008) from the NIRB in 2018, which was amended in 2020. The Project Certificates, and subsequent Water Licenses (#2AM-WTP1830), Government of Nunavut (GN), Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Land Lease, and Kivalliq Inuit Association (KivIA) Production Lease, allowed development of five gold deposits in the 12 years since the start of operations at the Meadowbank Mine and the first phase of the Whale Tail Mine. This has included construction of a gold mine and ancillary facilities including an All-Weather Access Road (AWAR), Whale Tail Haul Road (WTHR), barge unloading facilities, lay-down area, and a fuel tank farm near the Hamlet of Baker Lake. The AWAR and WTHR (the Road) form a continuous road linking the Hamlet of Baker Lake, the Meadowbank Mine and the Whale Tail Mine.

The Meadowbank Mine is located approximately 90 km north of the Hamlet of Baker Lake. Mining has ceased at Meadowbank, but the site hosts accommodation, an active mill, and ancillary mechanical, maintenance facilities, and vehicles. The Whale Tail Mine, located approximately 150 km north of the Hamlet of Baker Lake, is an open-pit, truck-and-shovel mine operation and will produce an estimated 23.5 million tons of ore. Ore is hauled from Whale Tail Mine to the Meadowbank Mine for milling on the WTHR.

Studies of caribou behaviour were conducted during spring migration, summer, and fall migration from 2020 to 2024 at the Mine, including the Road to monitor for potential Mine effects on caribou.

1.1 PROJECT TERMS AND CONDITIONS AND TERRESTRIAL ECOSYSTEM MANAGEMENT PLAN

Under the NIRB Certificate (#008) for the Whale Tail Mine, Term and Condition 28 requires the Mine to have a Terrestrial Ecosystem Management Plan (TEMP):

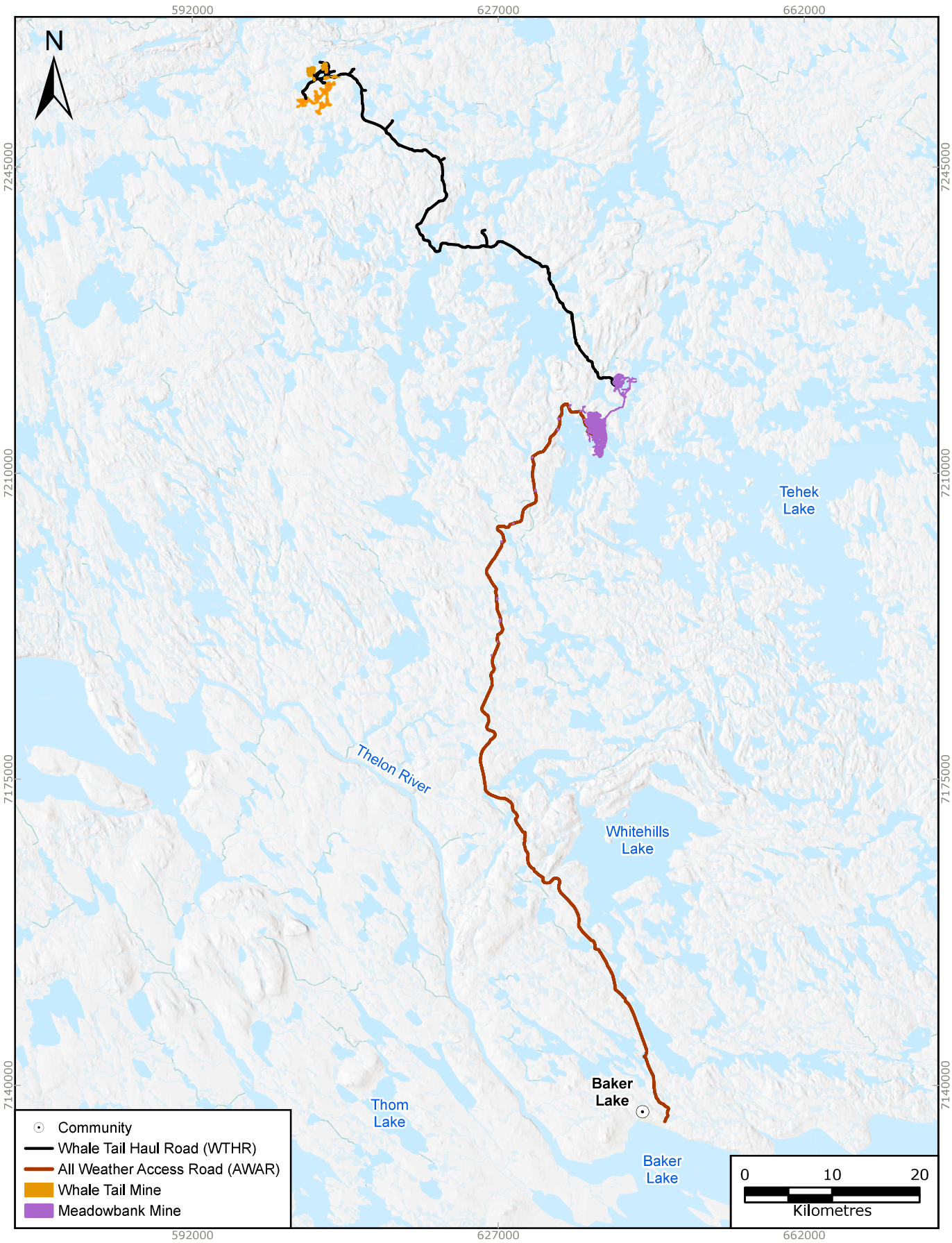
> *(NIRB #008; T&C 28) The Proponent shall maintain a Terrestrial Ecosystem Management Plan (TEMP) throughout all phases of the Project. The Plan shall include detailed monitoring, mitigation, and adaptive management measures for wildlife, with consideration for each Project activity predicted to affect wildlife, and with inclusion of specific triggers for mitigation and adaptive management intervention. The TEMP shall demonstrate consideration for all relevant commitments made by the Proponent throughout the Nunavut Impact Review Board's review of the Project.*

Additionally, NIRB Certificate (#004) for the Meadowbank Mine, Term and Condition 54 further outlines requirements for a TEMP, including:

> *(NIRB #004, T&C 54) Statistical validation to support the conclusions drawn from monitoring impacts of the mine and infrastructure on wildlife*.

The Meadowbank Complex TEMP (Agnico Eagle 2020) is designed to meet these conditions. The TEMP includes a survey program for caribou that records caribou behaviour in response to various disturbances.

FIGURE 1-1 LOCATION OF MEADOWBANK MINE AND WHALE TAIL MINE



CLIENT: AGNICO EAGLE MINES LIMITED
GIS NUMBER: AEG-15-075-01

DATE: 13 March 2025

PROJECTION: NAD 1983 UTM Zone 14N
SCALE: 1:600,000 when printed at 8.5x11

2. STUDY OBJECTIVES

Based on guidance from the TEMP, the overall objective of the caribou behaviour monitoring program is:

- To determine if caribou activity budgets (i.e., the proportion of time caribou spend exhibiting different behaviours) change with distance from the Mine, and to document caribou response to stressors.

To address the overall objective, detailed sub-objectives in 2024 were:

1. Estimate how Mine infrastructure including the Road influence the proportion of caribou displaying response behaviours.
2. Identify the stressors that influence the proportion of caribou showing response behaviors near Mine infrastructure, including the Road. Stressors which were considered in 2024 were:
    a. Road crossings with group size and distance to infrastructure;
    b. Behaviour type with group size and distance to infrastructure;
    c. Behaviour type and environmental/temporal variables;
    d. Road closure status;
    e. Season and side of the road;
    f. Number of disturbances;
    g. Response to disturbances;
    h. Direction of caribou and travel; and
    i. Convoy duration and size.

The primary hypothesis of this study was that caribou closer to the road would demonstrate a stronger response to vehicle disturbances.

3. BACKGROUND

Five caribou sub-populations may occur in proximity to the Mine: Lorillard, Wager Bay, Qamanirjuaq, Beverly, and Ahiak. However, it is primarily caribou from the Lorillard herd which occur near the Mine and include smaller numbers of caribou from the Ahiak and Wager Bay herds. Collar data indicates that caribou are present in the area mostly in late winter and during fall rut.

3.1 LORILLARD HERD

The Lorillard caribou herd is a mid-sized caribou herd that numbered 33,454 animals in 2021 (GN DOE 2021). Previous population estimates from 2002 and prior included caribou from the Wager Bay herd, because the delineation of calving areas was not known. The Lorillard herd range occurs entirely in Nunavut, with the core of its range stretching northward from Chesterfield Inlet on the Hudson Bay coast and westward toward Baker Lake.

The herd generally winters on the tundra in northern central mainland Nunavut. Spring migration is westward and north of Chesterfield Inlet, past the Hamlet of Baker Lake to a calving ground south of Wager Bay and close to the Hudson Bay coast (Nagy and Campbell 2012). Although caribou may be found in close proximity to the Hamlet of Baker Lake, Meadowbank Mine, Whale Tail Mine, the AWAR and WTHR year-round they frequent the area during late April and early May, which coincides with spring migration (Agnico Eagle 2020).

Following calving, the caribou form into large groups and generally move west and inland, gradually returning west towards their wintering areas by early December (Nagy and Campbell 2012). Throughout this period, caribou may occur in close proximity to or cross the Mine infrastructure.

3.2 EXISTING CARIBOU MANAGEMENT MEASURES

As per the TEMP, during peak migration the Road is closed to all but essential Mine traffic. To reduce sensory disturbance during road closures, essential Mine traffic typically travels in scheduled convoys. During non-peak periods, caribou observations near the road trigger speed restrictions that apply to all mine traffic. Road closures are triggered separately for the WTHR and the AWAR. Drivers for the Mine are also trained to slow when caribou are within sight and follow the mitigation measures outlined in the TEMP.

Caribou surveys were considered an essential activity by the Mine, allowing for the use of a pickup truck on the Road during road closures.

3.3 TERRESTRIAL ADVISORY GROUP

A Terrestrial Advisory Group (TAG) was formed in 2019 as a collaborative forum to discuss Inuit Qaujimajatuqangit (IQ), Traditional Knowledge (TK) and western science applications to mitigation and monitoring programs for the Meadowbank Mine, including on caribou movement in the Mine area. Members of the group include the Government of Nunavut (GN), the KivIA and the Baker Lake Hunters and Trappers Association (HTO). Following a discussion of the caribou behaviour survey results in 2020 and 2021, the TAG and particularly KivIA suggested several changes to the survey protocol and analysis methods. These changes included adding a variable for road closures

and testing whether the behaviour "walking" could be considered a response behaviour. In 2022, a variable for caribou movement direction relative to the Road was added to the analysis and additional information was collected on the speed of passing vehicles. In 2023 and 2024, the duration and number of vehicles in essential Mine traffic convoys was recorded to understand how these variables may influence caribou behaviour. Agnico Eagle endeavored to incorporate all the suggestions of the TAG into the 2024 data collection process and analysis.

4. STUDY AREA

The Meadowbank Mine is located approximately 90 km north of the Hamlet of Baker Lake, and the Whale Tail Mine is located approximately 150 km north of the Hamlet of Baker Lake. The Minis approximately 300 km inland from the northwest coast of Hudson Bay and is above the tree line near the Arctic Circle. The local physiography is characterized by numerous lakes and low, rolling hills covered mainly by lichen/rock complexes, and heath tundra.

The study area for the caribou behaviour monitoring program extended from the southern extent of the AWAR at the Hamlet of Baker Lake north to the northern end of the Whale Tail Mine footprint and included the Meadowbank Mine and the WTHR (see Figure 1-1). Behaviour surveys were conducted on any caribou that could be observed from Mine infrastructure or the Road up to a distance of three km with the aid of binoculars.

5. METHODS

5.1 BEHAVIOUR SURVEYS

Survey methods followed protocols for monitoring caribou behaviour developed by the Government of Northwest Territories Department of Environment and Natural Resources (GNWT ENR 2017). In 2020, ERM refined these methods for Agnico Eagle's Nunavut mine operations. The updated methods focus on scan samples, *in lieu* of both scan and focal samples. Given time and personnel constraints, the focus on scan samples was a more efficient use of time and produced better quality data. The updated methods also include an initial survey step to randomize which group of caribou to monitor when multiple groups are available. In each year between 2021-2024 these methods were further updated to reflect lessons learned since 2020. The 2021 updates included recording additional information such as if the caribou were east or west of the Road. The 2022 updates included recording the direction of caribou travel and the speed of vehicle traffic. The 2023 updates included recording the size and duration of convoys operating on the closed road. Each of these updates were retained and incorporated in 2024. Detailed survey protocols are attached in Appendix A.

Behaviour surveys were completed by:

1. Identifying caribou groups visible from Mine infrastructure including the Road;
2. Randomly selecting groups for observation; and
3. Recording the behaviour of individuals in groups of different sizes, including their responses without any disturbance and in response to Mine-related activities and natural factors.

Surveys were conducted during spring migration, summer, fall migration, and winter with efforts to conduct roughly equal numbers of surveys in spring and fall migration seasons. Reconnaissance surveys were initially conducted during the 2020 field season to identify where caribou groups were located but it was determined that many caribou groups would move away from the Road before the field crew returned to conduct the behaviour survey. Where multiple groups of caribou were observed, surveyors randomly chose which group to sample, or specifically chose groups to fill sampling gaps specifically for the group size and distance from Road variables. Filling survey gaps ensure that adequate data is collected for both of these key variables.

Information recorded included the location of each survey, including GPS coordinates, weather conditions, road structure, and location of the caribou group in relation to the Road. A laser rangefinder was used to record distance starting in 2021, however, previous to that distance values were estimated by the observer. The behaviour of individual caribou in the group were categorized when the survey started and every three minutes after (referred to here as a "time interval") until 30 minutes had elapsed. Behaviour categories and their definitions were standardized following GNWT ENR (2017) classifications. The behaviour categories were feeding, lying down, standing, alert, walking, and trotting or running.

At each three-minute interval, surveyors recorded the numbers of individuals in the group exhibiting each behaviour at that time. When surveying large groups (>100 individuals) a subset of individuals was surveyed as opposed to the entire herd. Therefore, the behaviour of large

groups were defined by the behaviour of the sampled subset. A disturbance event is defined as any human-caused loud noise, low-flying aircraft, or vehicle travelling on the road. If a disturbance event occurred during the survey, the time and type of disturbance was recorded. Of the disturbances recorded in the five years of data collection, 95% were from road related disturbances (vehicles) and 5% were from blasts or helicopters. Blast disturbances were monitored under the scope of the Blast Monitoring Program, developed in collaboration with the TAG (Agnico Eagle 2020). In the analysis all disturbances are treated equally.

In this report, "alert" and "trotting or running" behaviours are referred to collectively as response behaviours, but it is important to note that this is irrespective of whether there were disturbances recorded. Walking was also assessed as a response behaviour in some analyses, which are specifically noted in the results.

Following recommendations from the TAG in 2021, an additional set of longer surveys was added to the annual survey methodology to specifically look at the behavioural response to convoys of vehicles. These surveys were 90 minutes each, consisting of a "before convoy," "during convoy", and "after convoy" survey. Observers sought out caribou groups that were likely to remain within view for 90 minutes based on surrounding terrain. However, caribou frequently walked out of sight prior to completion of the 90-minute survey period. A total of 9 surveys were completed in both 2021 and 2022, 17 surveys in 2023, and 10 surveys in 2024.

5.2 DATA ANALYSIS

The objective of the data analysis was to quantify trends in the survey data and determine whether factors such as distance to Mine infrastructure (including the Road), group size, or disturbances influence caribou behavior. The primary hypothesis was that caribou closer to the road would demonstrate a stronger response to disturbances. An initial exploratory analysis was completed to visualize the data and determine the appropriate method for analyzing the data.

A regression analysis was conducted to test whether the data from these surveys could be analyzed statistically. To increase the power to detect changes in caribou behaviour, the behaviour categories were grouped for analysis into response behaviours (alert and trotting or running) and non-response behaviours (feeding, lying down, standing, and walking).

Following the 2020 analysis, the TAG requested Agnico Eagle explore whether the proportion of walking caribou changed as a response to disturbance. This was done to see if walking would be better categorized as a response behaviour or non-response behaviour. To test this, a model that included walking and response behaviours was run in addition to the original model with just response behaviours.

Generalized linear mixed-effects models (GLMMs) were used to assess the differences in the proportion of response behaviours in surveyed animals as a function of various controlling variables, including the occurrence of disturbances. Proportions were modelled using a binomial distribution due to the binary nature of the response variable. Because small groups naturally have greater variability in values (i.e., more likely that "all" or "none" of caribou are alarmed when there are only two caribou) an offset for the total number of caribou with tallied behaviour was included. This regression framework provides a means to control for environmental variables,

repeated measurements, and spatial correlation. Random effects for survey ID to control for spatial and temporal autocorrelation were also included.

Statistical analyses were conducted using R Statistical Software version 4.3.1 (R Core Development Team, 2024). Two dependent variables were tested:

1. The first dependent variable tested was the proportion of response behaviours in each 3-minute interval in each survey.
2. The second dependent variable tested was the proportion of walking plus response behaviours in each 3-minute interval in each survey.

The two dependent variables were each modelled against a suite of potentially important variables to determine if there was any statistical relationship. The variables included in this analysis were group size, distance to the Road, temperature, wind speed, season and side of the Road (upstream/downstream), the Road's status (closed or open), and a binary variable identifying whether a disturbance occurred during each 3-minute interval. The distance to the Road is a binned categorical variable to account for changes in the method of distance recording made in 2021 and allow for the inclusion of 2020 data. Season and side of the Road were included as an interaction term because direction of travel is seasonally dependent. This means that season and side of the Road are included in the model together as an interaction and individually as fixed effects. The interaction term makes it possible to identify the "upstream" and "downstream" side of the Road, based on the season. In 2024, the convoy duration and number of vehicles in each convoy was collected, however, limited data precluded the inclusion of this data in models for 2024.

For each dependent variable, GLMMs were constructed and tested for model fit, as evidenced by the Akaike Information Criterion (AIC). The AIC is a number that is helpful for comparing models as it includes measures of both how well the model fits the data and how complex the model is (simpler is usually better). The top models were identified as having a low AIC and were within a two-unit difference in AIC ($\Delta AIC \leq 2$) of the top-ranked model (i.e., the model with the lowest AIC; Burnham & Anderson 2004). This is the industry standard for identifying models that are essentially "equally good" at explaining the data. Models with a difference in AIC (ΔAIC) of two to four from the top model are generally considered to have "limited support" (Burnham & Anderson 2004).

A second modelling procedure was used to investigate the amount of time caribou were engaged in response behaviour associated with disturbances during a survey. For a response to be included, the proportion of caribou exhibiting response behaviour after a disturbance had to be 40% greater than in the interval before disturbance. The response was considered "over" when the proportion of caribou exhibiting response behaviour returned to the level observed in the interval before the disturbance (±5%). This variable, called "duration of response", was assessed for each survey during which at least one disturbance occurred. Surveys that started with 100% of individuals exhibiting response behaviour were excluded as the associated disturbance was unclear and a baseline behaviour was not clear. In surveys where there was more than a single period of response behaviour, the total time disturbed was calculated for that survey. Because the duration of response is a "time to event" variable (time to return to background behaviour), a Cox's proportional hazards regression was used to model the duration. Durations were right-censored if the caribou did not return to background behaviour prior to the end of the observation

period. As the start and end of the response could happen within 3-minute intervals, but the exact time was not recorded, we assumed the duration was three minutes for every interval included. For example, if the response behaviour occurred only within one interval it was given a duration of three minutes, while if it occurred in two intervals it was given a duration of six minutes. If no response occurred after a disturbance, it was given a duration of 0 minutes.

A duration of response model was fit with caribou group size, and a variable indicating the number of intervals which contained a disturbance (number of disturbances). The sample size was too small to include other variables or interaction terms and still achieve convergence.

6. RESULTS AND DISCUSSION

6.1 CARIBOU DISTRIBUTION RELATIVE TO THE MINE

Through a Data Sharing Agreement, the GN provided Agnico Eagle caribou GPS collar locations during the spring migration over the five years surveyed (2020 - 2024). Data collected from the GPS collars indicated when collared caribou were approaching the Mine and the Road.
When caribou were approaching the Mine, viewsheds or road surveys were conducted as required by Agnico Eagle personnel to identify appropriate management actions. The results of the viewshed or road surveys and the associated collar data informed the decision to begin dedicated caribou behavior surveys. In addition to spring migration, surveys were completed in the summer opportunistically when caribou were observed, in the fall during peak fall migration, and opportunistically in the winter season.

Survey locations by season are presented in Figure 6.1-1. During spring migration, summer, fall migration, and winter scattered groups of caribou from the Lorillard herd were observed passing through or near the study area, with the highest numbers of caribou observed in April (23 groups). During spring migration, caribou were observed primarily along the WTHR in 2020 and 2022 but were more common along the AWAR in 2021 and 2023. Caribou were observed most frequently during the summer calving and fall migration seasons in the southern portion of the study area along the AWAR in 2020; however, this trend was not as clear in the years following. The location and distribution of the behaviour surveys are outlined in Figure 6.1-1. Differences in survey distribution between years may result from limited sampling bias primarily in early survey years, however, it is more likely explained by interannual variations in where caribou occur relative to the Mine.

6.2 CARIBOU BEHAVIOUR SURVEYS

In total, 70 behaviour surveys were completed in 2024 at the Mine (Table 6.2-1). Surveys were relatively balanced equal between spring and fall migration periods and the overall seasonal distribution of surveys was similar to 2023. The 2024 survey year contained seven winter surveys which is the most of any year prior (Table 6.2-1). In 2021 there was a greater emphasis on surveying during spring migration; however, that emphasis changed in subsequent years to focus on completing surveys during fall migration. During all survey years behaviour surveys were opportunistically conducted whenever caribou were encountered on reconnaissance drives.

Survey data was collected across a range of key survey variables in 2024 which is consistent with previous survey efforts. Surveys were completed on all caribou group sizes (Table 6.2-2). Surveys in 2024 recorded road crossings across a variety of caribou group sizes although road crossings remained low in occurrence which is consistent with previous years (Table 6.2-2; Appendix B). Surveys with disturbance events were captured across all caribou group sizes and no group size category failed to register at least 25% of surveys containing a disturbance in 2024 (Table 6.2-2). In total over five collective years of data collection 49% of surveys contained a disturbance event (Appendix B). Surveys were spatially distributed across both east and west sides of the Road in both 2024 and previous years (Table 6.2-3 and Appendix C). Results from all surveys 2020 through 2024 are reported in Appendix D.

FIGURE 6.2-1 LOCATIONS OF BEHAVIOUR SURVEYS BY DATE

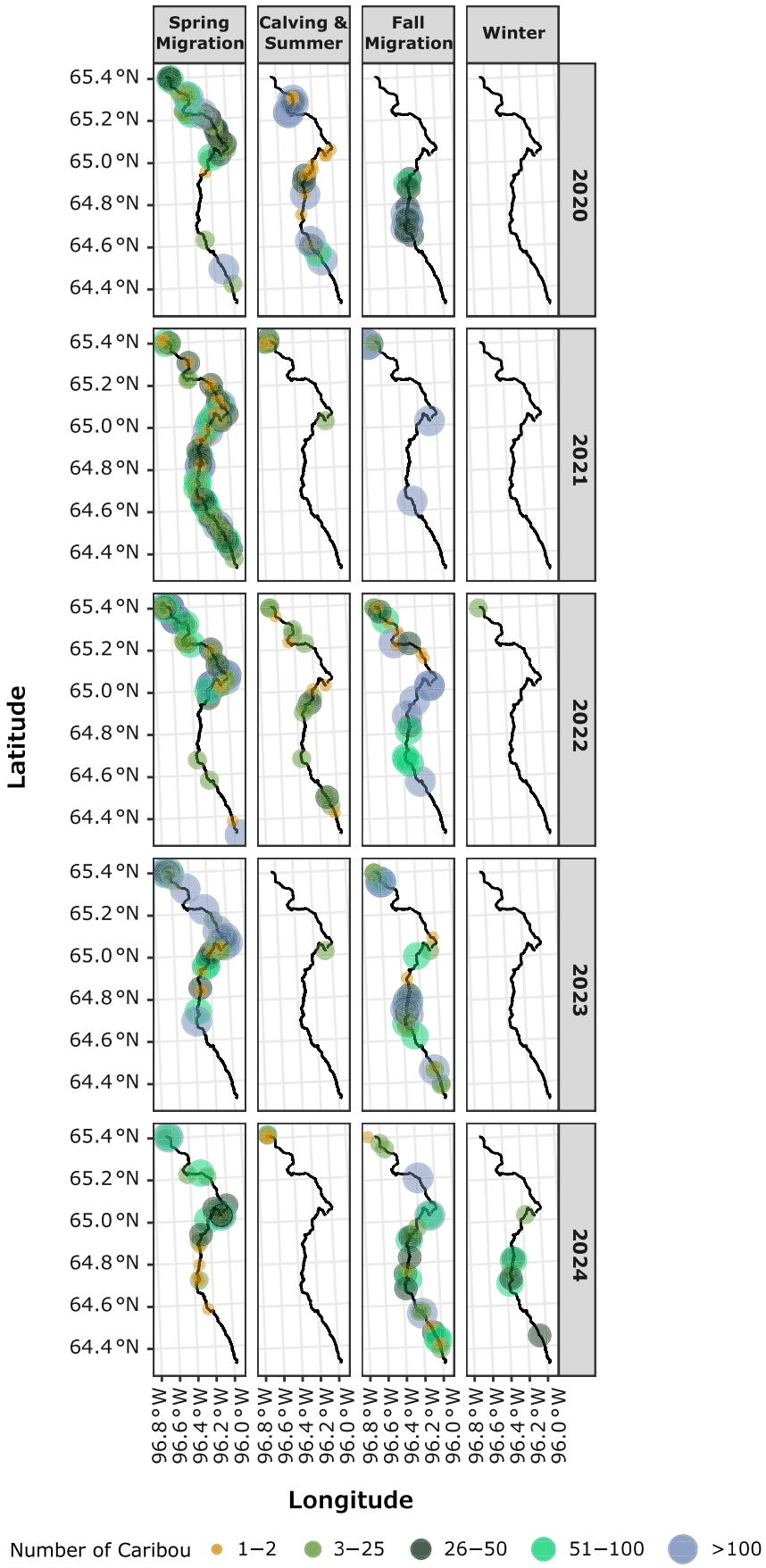


TABLE 6.2-1 CARIBOU BEHAVIOUR SURVEYS SEASONAL DISTRIBUTION, 2020 TO 2024

Season	2020	2021	2022	2023	2024
Spring Migration	71	114	63	38	31
Calving/Summer	31	15	18	1	5
Fall Migration	14	5	23	31	27
Winter	-	-	1	-	7
Total	**116**	**134**	**104**	**70**	**70**

TABLE 6.2-2 MEADOWBANK COMPLEX CARIBOU BEHAVIOUR SURVEYS DATA SUMMARY, 2024

Caribou Group Size	Total Number of Surveys 2024	Surveys with Disturbance 2024	Surveys with Road Crossing 2024
1-2	15	9	1
3-25	23	13	0
26-50	15	4	0
51-100	12	5	1
>100	5	2	1
Total	**70**	**33**	**3**

TABLE 6.2-3 SUMMARY OF SPATIAL DISTRIBUTION OF SURVEYS, 2024

Season	Surveys of Caribou on East Side of the Mine Infrastructure 2024	Surveys of Caribou on West Side of the Mine Infrastructure 2024
Spring Migration	6	25
Calving/Summer	2	3
Fall Migration	20	5
Winter	2	4
Total	**30**	**37**

Note:
An additional one survey in winter and two surveys in fall observed caribou on both sides of the road.

6.3 EXPLORATORY ANALYSIS RESULTS

The exploratory analysis was conducted to determine if there were any trends or interactions in the following variables: road crossing, group size, distance to the Road, weather and timing, Road closure status, side of the Road (east or west), number of disturbances, and response time following disturbances. An additional analysis was planned to look at how the number of vehicles in a convoy and the duration of a convoy influence caribou behaviour, however, due to a lack of data this was not included in 2024. All results use the combined data from 2020 to 2024, unless otherwise stated.

Exploratory analyses are focused on exploring potential trends in the data, with results being a qualitative interpretation of the patterns observed. Statistical analyses are presented in Section 6.4.

6.3.1 COMPARING ROAD CROSSINGS WITH GROUP SIZE AND DISTANCE TO INFRASTRUCTURE

6.3.1.1 ROAD CROSSING

There is not a clear relationship between caribou group size and road crossing observations. Across all years, crossings were most observed with groups totaling over 100 individuals which made up 35% of observed crossings (nine observations; Appendix B; Figure 6.3-1). In contrast groups of 51-100 individuals made up only 8% of observed crossings (two observations; Table 6.2-2; Figure 6.3-1). In addition, there was not a clear relationship between the distance of caribou to the road and the observation of road crossings. This indicates that caribou observed closer to the road were not more likely to cross the road than caribou occurring at further distances from the road (Figure 6.3-1).

6.3.1.2 GROUP SIZE AND DISTANCE TO INFRASTRUCTURE

Compiled caribou group size data from 2020 - 2024 in relation to distance from the Road is outlined in Figure 6.3-1. From 2021 through 2024 efforts were made to increase the number of surveys containing large groups of caribou within 300 m of the Road. Despite this, there continues to be a tendency for groups of over 50 individuals to be observed on average further from the road compared to groups under 50 individuals. To date only 7 groups larger than 50 individuals (10% of total observations of groups greater than 100 individuals) were recorded within 100 m of the Road at the start of the survey, two in 2021, three in 2022, and two in 2023.

This may indicate that caribou tend to avoid areas within 300 m of the Road, or it may be a result of observability bias, where smaller groups are more difficult to observe at further distances from the road. Regardless of the mechanism, this represents a potential source of error and was considered in the statistical analyses so that the results were not biased (see Section 6.4.1).

6.3.2 COMPARING BEHAVIOUR TYPE WITH GROUP SIZE AND DISTANCE TO INFRASTRUCTURE

Caribou behaviour was relatively consistent between group sizes in 2024 (Figure 6.3-2a). The “feeding” behaviour was the most observed behaviour in all group sizes. Few response behaviours were observed in all group sizes.

In 2024 caribou within 50 m of the Road were observed standing over 90% of the time (Figure 6.3-2b). Caribou in the 50-100 m distance category displayed approximately 70% walking behaviour, which is the highest proportion of this behaviour observed across all distance categories in all years. Similar to group size, no distance category had surveys with more than 10% of caribou displaying response behaviours.

The relationships between behaviour and group sizes or distances to the Road are examined in greater detail in the statistical analysis.

FIGURE 6.3-1 CARIBOU GROUP SIZE VERSUS DISTANCE FROM THE CARIBOU TO THE ROAD

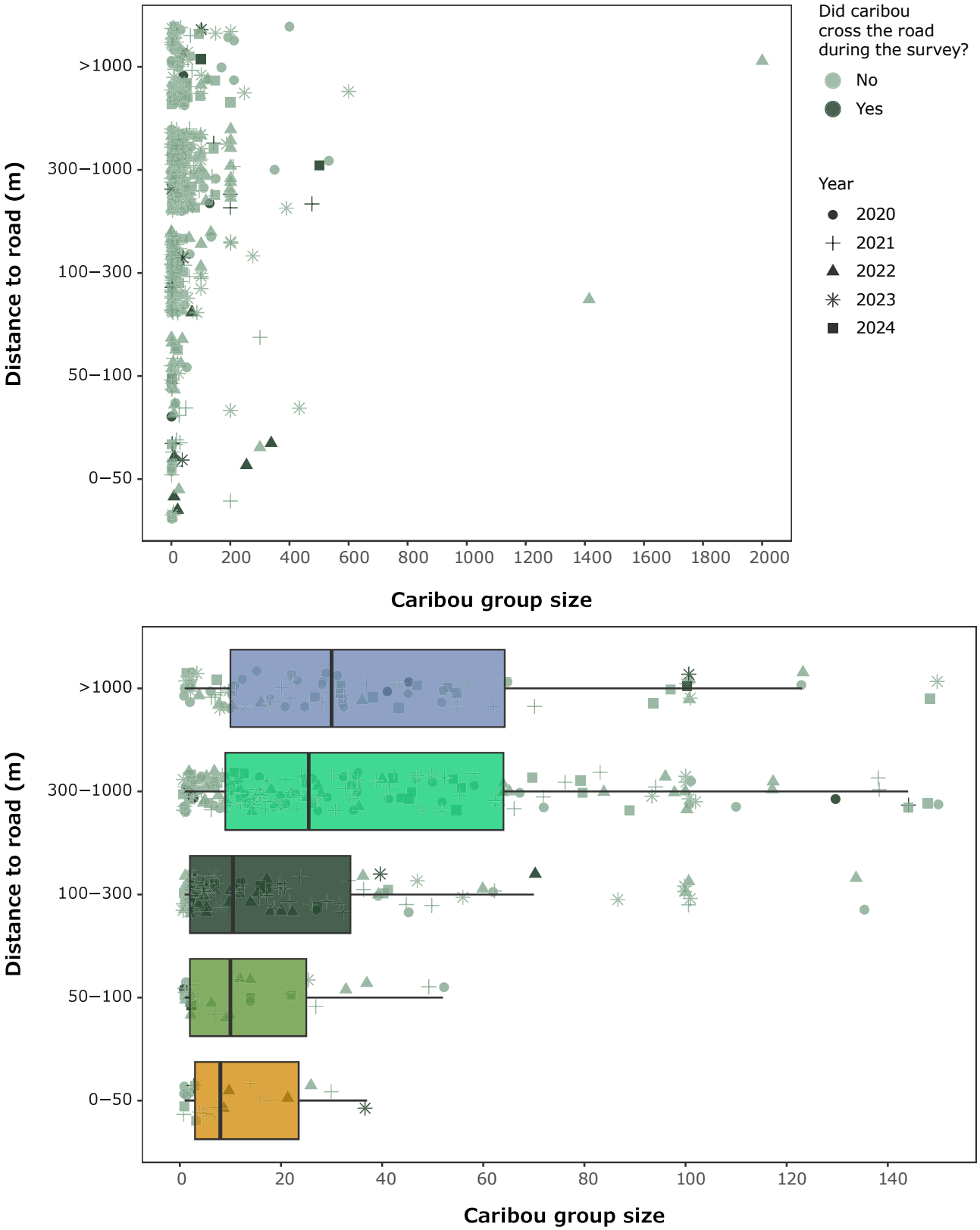
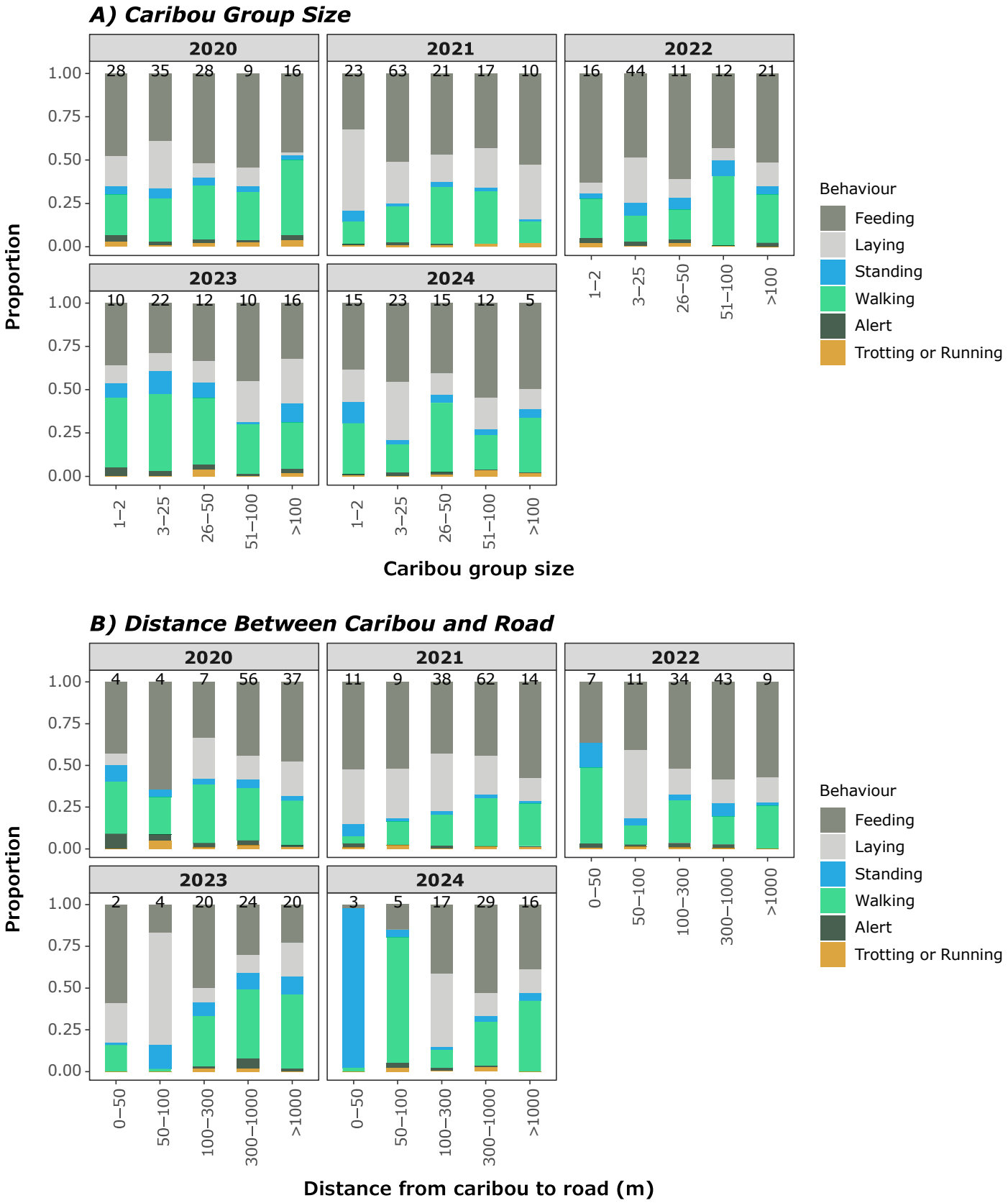


FIGURE 6.3-2 AVERAGE PROPORTION OF EACH BEHAVIOUR TYPE OBSERVED



6.3.3 BEHAVIOUR TYPE AND ENVIRONMENTAL/TEMPORAL VARIABLES

To determine if environmental factors such as heat or high winds were influencing caribou behaviour the proportion of response behaviours, environmental variables, and temporal variables were graphed (Figure 6.3-3).

No trend was evident in the relationship between wind speed and response behaviours. It appears that caribou response behaviours may increase slightly with temperature, however, sporadic and limited data in warmer temperatures may be influencing this data. This suggests that neither wind speed or temperature appear to have a notable effect on behaviour. It should be noted that surveyors typically did not travel on the road during extreme weather conditions and therefore variability in weather conditions was low. Exploration of the relationship between date and caribou behaviour revealed that date was not associated with caribou behaviour.

6.3.4 ROAD CLOSURE STATUS

It was hypothesized that response behaviour would occur at a higher proportion when the Road was open as opposed to closed. Surveyors conducted data both when the Road was open and while it was closed starting in 2021. More surveys were conducted with the Road closed (264 surveys) compared to open (174 surveys; Figure 6.3-4) across all years. There is not a noticeable difference in response behaviours shown by caribou while the Road was closed as opposed to when it is open. The level of response behaviour (averaged across all observations with and without disturbances) is low (<10%) both when the Road is open and when it is closed (Figure 6.3-4). There was a higher proportion of individuals walking on average when the Road was closed as opposed to when it was open, however, this may be due to closures occurring more often during peak migration times. Additionally, it should be noted that convoy surveys were included in Figure 6.3-4 and these surveys always occurred while the road was closed. Convoy surveys however only accounted for 14% (10 surveys) of surveys during road closures and cannot entirely explain the differences observed in Figure 6.3-4. This relationship is further explored in the statistical analysis.

6.3.5 SEASON AND SIDE OF THE ROAD (UPSTREAM/DOWNSTREAM)

The movement pattern for caribou in the area around the Mine is variable based on the season. During spring migration, the dominant direction of travel is from west to east, whereas in summer and during the fall migration the dominant direction is from east to west. It was hypothesized that caribou behaviour may vary depending on whether the caribou had already crossed the road ("downstream" of the road) or whether they were anticipating crossing the road ("upstream"). There does not appear to be observable differences in the proportion of response behavior observed between upstream and downstream caribou groups. It does appear that the walking behaviour occurs at a higher proportion on the upstream side of the road during spring migration. These trends are further explored in the statistical analysis.

FIGURE 6.3-3 PROPORTION OF CARIBOU DISPLAYING RESPONSE BEHAVIOUR BY TEMPERATURE, WINDSPEED AND DATE

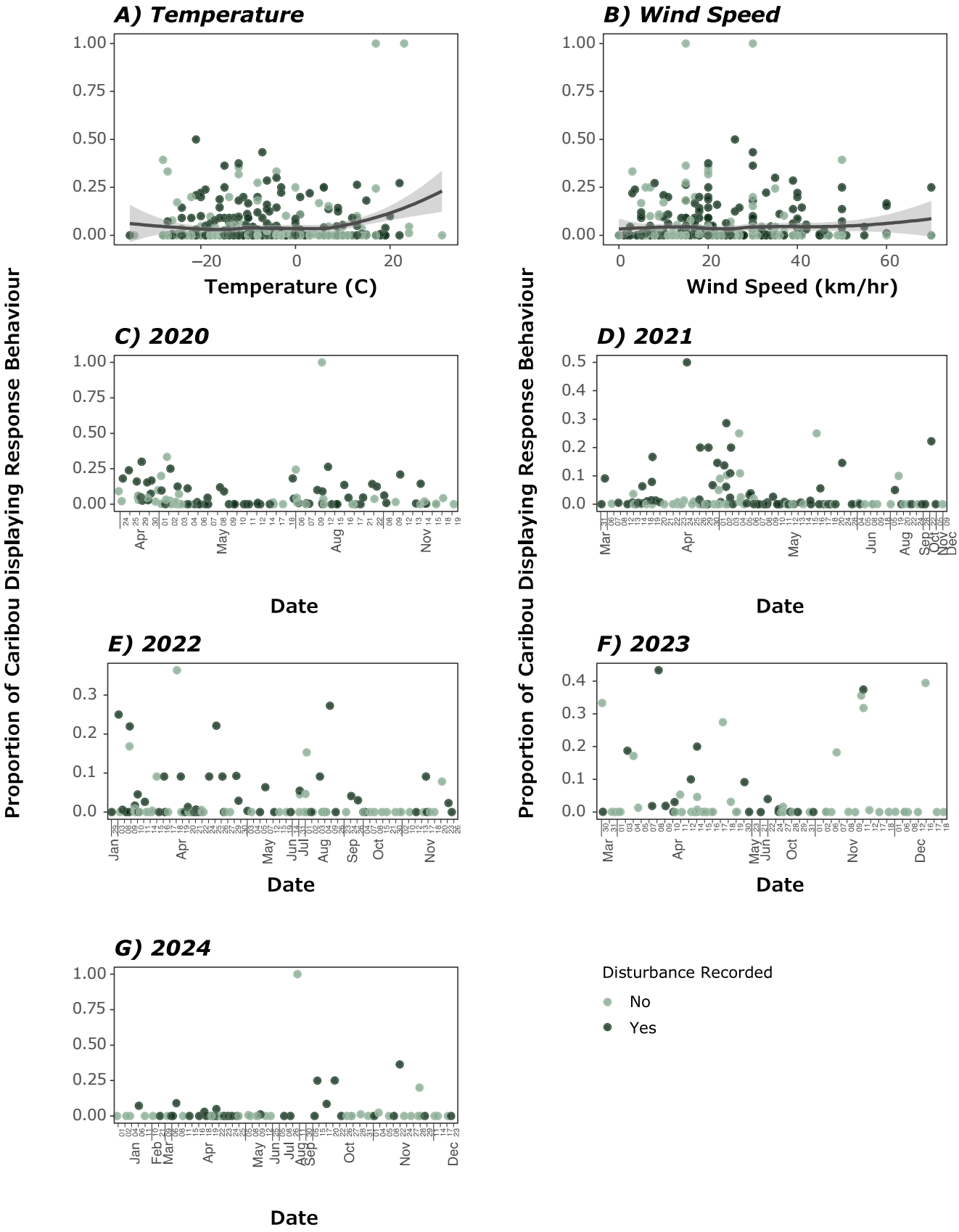
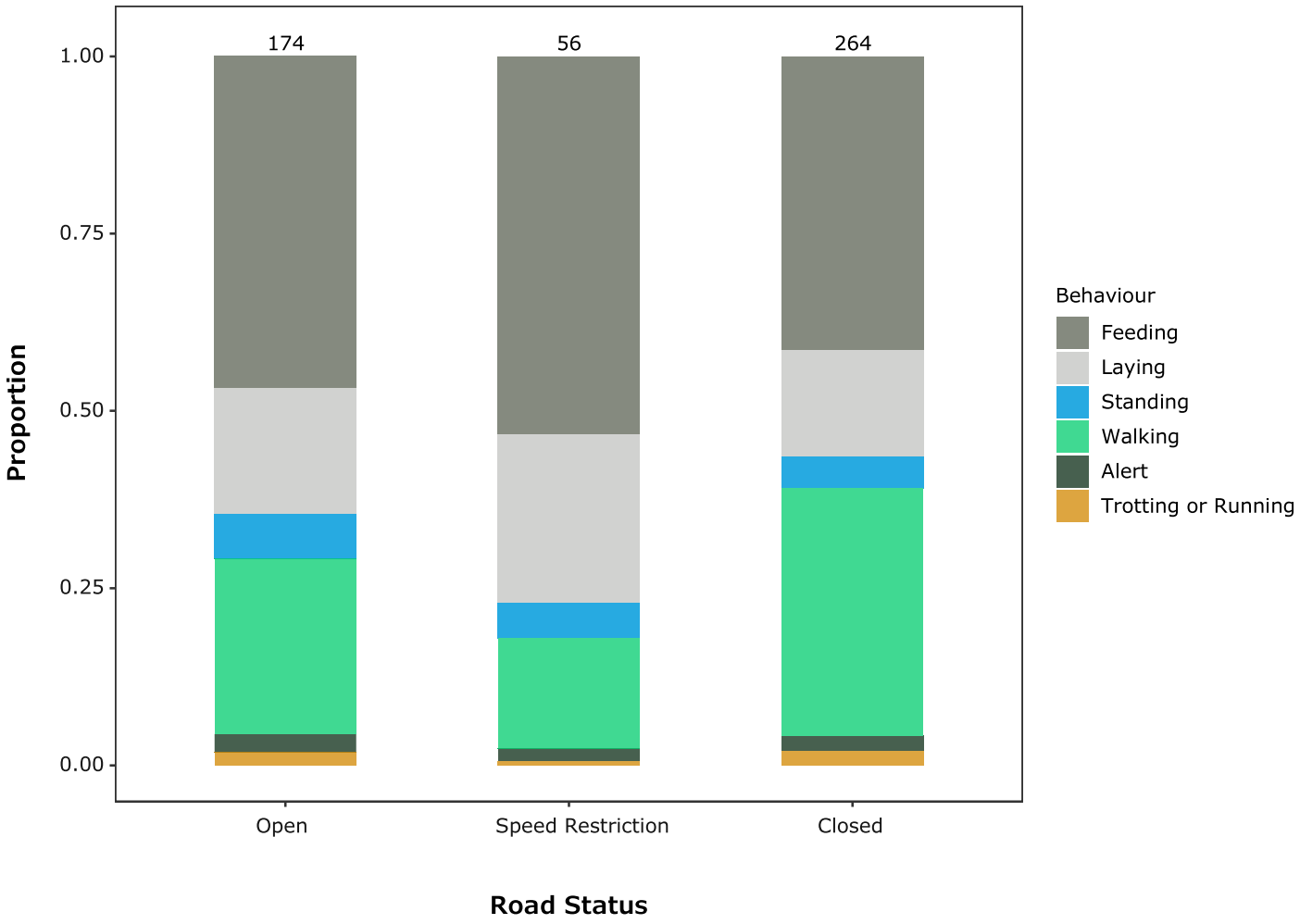


FIGURE 6.3-4 AVERAGE PROPORTION OF EACH BEHAVIOUR TYPE BY ROAD STATUS



A hypothesis is that caribou are hesitating to cross the road but once they cross the road, they move away from the road quickly. If this prediction was true than it would be expected that caribou would be observed close to the road on the upstream side and there would be fewer groups on the downstream side or the downstream side groups would be further from the road compared to the upstream groups. In contrast, the results show that groups of caribou were observed on both sides of the road (Figure 6.3-5). During the spring migration there was a greater number of groups on the upstream side of the road (west side in spring), which suggests that caribou may tend to gather prior to crossing the road. In comparison the summer season sees relatively equal numbers of caribou groups on each side the road, and the fall migration sees more groups on the upstream side (east side in fall), however, this is not as evident as in spring.

6.3.6 NUMBER OF DISTURBANCES

When larger proportions of individuals within a group respond to disturbance events, it takes longer for the group as a whole to return to their baseline (pre-disturbance) behaviour when compared to groups with smaller proportions of responding individuals (Figure 6.3-6a). It appears that surveys with multiple disturbances do not consistently produce either a larger or longer response. Surveys with multiple disturbances vary from long-lasting full-group disturbances to shorter and partial-group responses.

The proportion of caribou displaying response behaviour when exposed to zero, one, or multiple disturbances is shown in the density plot in Figure 6.3-6b. The results suggest that there is no difference in the proportion of caribou displaying response behaviours between those not exposed to, exposed to a single, or exposed to multiple disturbances. Figure 6.3-6b shows an average proportion of response behaviours across the entire 30-minute survey, and therefore in some instances the proportion of response behaviours may have been obscured by the large number of intervals with no response behaviour.

6.3.7 RESPONSE TO DISTURBANCES

Although summarizing caribou behaviour survey data over the entire 30-minute survey allows for broad comparisons to be made, it may allow for response behaviour to be obscured in an otherwise uneventful survey. To examine the response to disturbances within a survey, the proportion of response behaviours was plotted per three-minute interval in each survey, as shown for a subset of surveys in Figure 6.3-7 (see Appendix E for all plots of all surveys). In Figure 6.3-7, the response behaviours of “alert” and “trotting or running” are combined to create the total proportion of caribou exhibiting behaviour responses in any given time interval and plotted over time within the 30-minute survey. Disturbance events are denoted by a grey vertical bar, and spikes in response behaviours during or immediately following a disturbance suggest caribou are responding to the disturbance.

FIGURE 6.3-5 AVERAGE PROPORTION OF EACH BEHAVIOUR TYPE OBSERVED ON EAST AND WEST SIDE OF ROAD

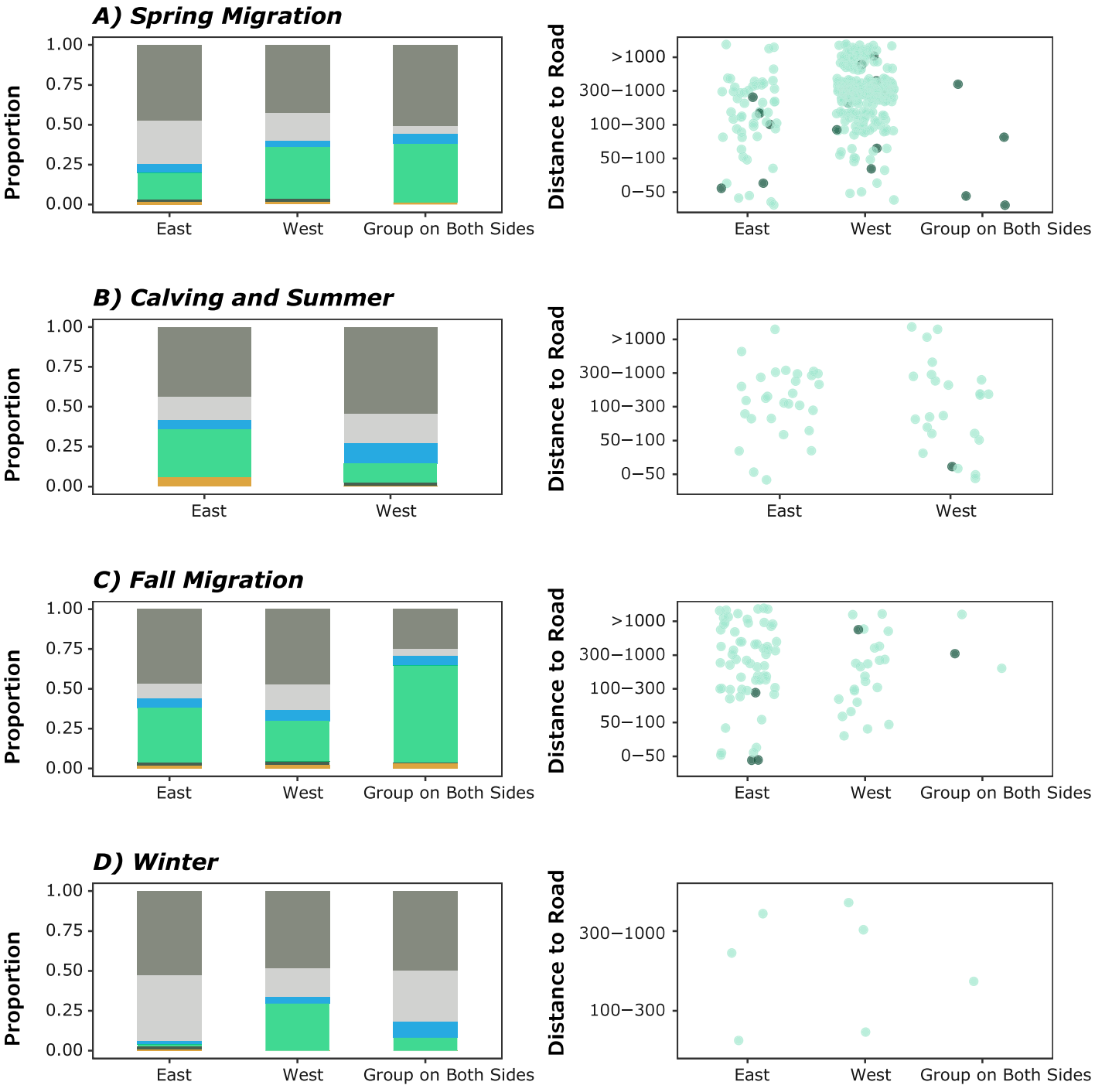


FIGURE 6.3-6 COMPARISON OF RESPONSE BEHAVIOURS BY NUMBER OF DISTURBANCES

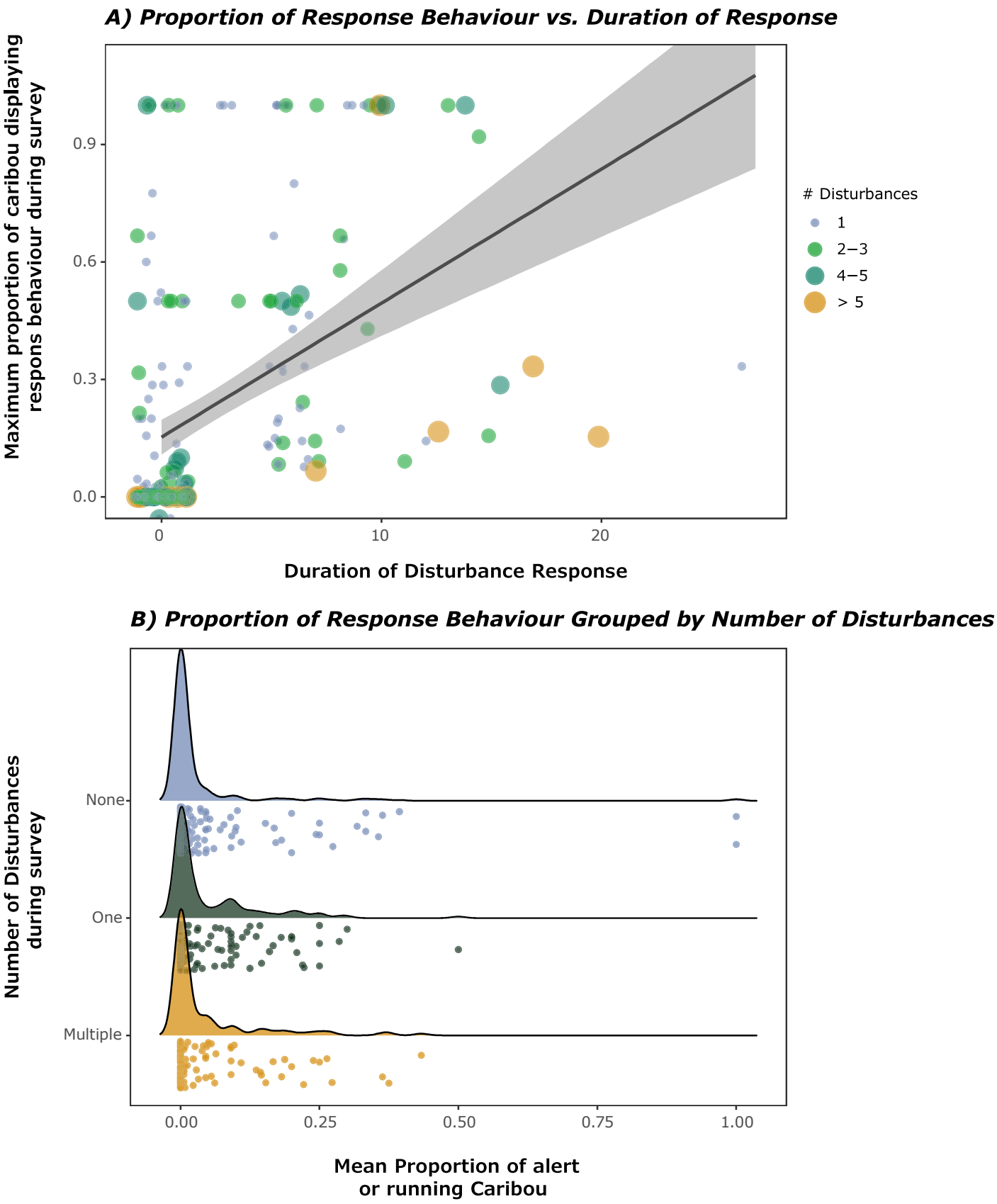
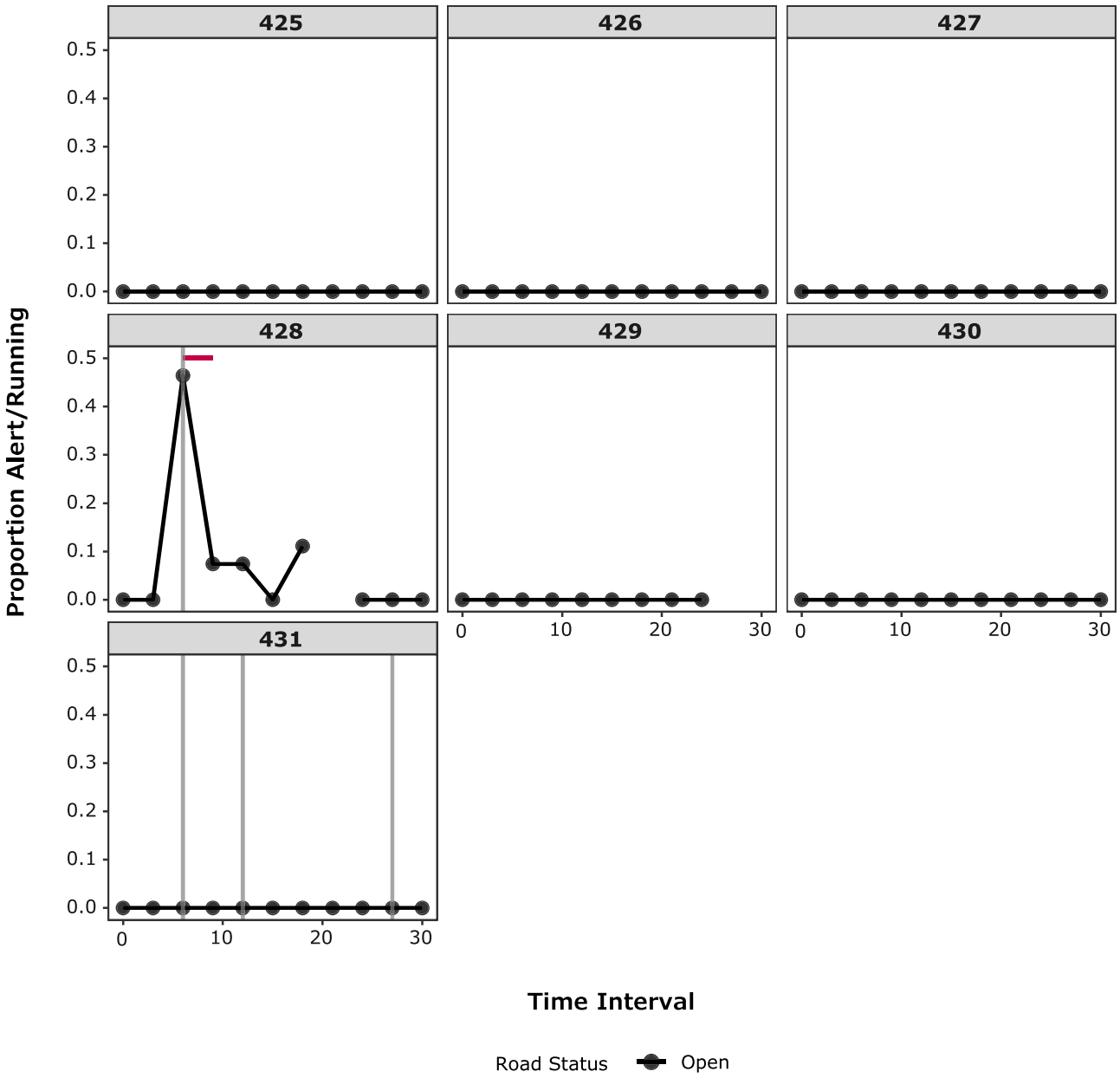


FIGURE 6.3-7 PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – EXAMPLE SUBSET



Note: See Appendix C for all surveys from 2020, 2021 and 2022.

6.3.8 DIRECTION OF CARIBOU TRAVEL

In response to the 2021 caribou behaviour analysis the TAG suggested incorporating the direction caribou travelled in relation to the Road (i.e., if caribou were walking parallel or perpendicular to the Road). This is of particular interest as walking parallel to a potential threat is a known behaviour in some cervid species. Inclusion of this variable in combination with whether caribou were upstream or downstream of the dominant direction of travel was suggested to help determine if caribou were walking as a response to a disturbance or not. In response to this suggestion, a field for direction of travel was added for the 2022 survey season. Note that the suggestion was made after spring migration 2022, so data are only available for surveys in summer and fall of 2022, resulting in 41 entries for direction of travel in 2022, and 70 entries annually in both 2023 and 2024.

It was most common for caribou to be stationary when observed (40%; 28 groups), whereas 39% (27 groups) of observed groups were moving parallel to the Road, and 21% (15 groups) of observed groups were moving perpendicular to the Road. These results remain similar to those seen in 2022 and 2023.

6.3.9 CONVOY DURATION AND SIZE

In response to the 2023 caribou behaviour analysis the TAG suggested incorporating the number of vehicles within, and the duration of, convoys occurring while the Road is closed. This is of interest as longer lasting disturbances or convoys with a larger number of vehicles may influence the response of caribou to the disturbance. Convoy duration and size data was collected in 2024 in response. A total of nine convoy surveys were completed, five of which were completed during spring migration and four were completed during the fall migration. The average number of vehicles per convoy in 2024 was six, which included an average of three light vehicles and three medium vehicles per convoy (Table 6.3-1). No heavy vehicles were included in convoys in 2024 (Table 6.3-1). Convoy variables including convoy size and duration will be included in future analyses when increased data points are available to allow for sufficient modelling efforts.

TABLE 6.3-1 VEHICLE COMPOSITION OF CONVOYS IN 2024

Date	Start Time	End Time	Direction of Travel	Light	Medium	Heavy	Total
AWAR							
4/19/2024	8:30	14:32	South	3	5	0	8
4/19/2024	13:10	13:43	North	3	6	0	9
5/9/2024	8:21	10:47	North	2	4	0	6
10/17/2024	7:44	14:48	North	2	0	0	2
11/29/2024	12:30	13:08	South	3	0	0	3

Date	Start Time	End Time	Direction of Travel	Light	Medium	Heavy	Total
WTHR							
4/23/2024	7:27	8:12	South	4	8	0	12
4/23/2024	14:17	15:09	North	4	1	0	5
11/28/2024	10:02	10:31	South	3	0	0	3
11/28/2024	10:47	11:42	North	3	0	0	3

6.4 STATISTICAL ANALYSIS RESULTS

6.4.1 MODEL FORMULATION

Initial results for the response behaviour model indicates that the distance of caribou to the Road was not a good predictor for response behaviour regardless of how models were parameterized. Therefore, further models did not include this variable. The final models had many parameters, and it was difficult to attain model convergence. As a result, model variables that had little or no explanatory power and were not variables of interest were dropped from the models. Final models for proportion of response, contained caribou group size, whether a disturbance occurred, and temperature. However, the summary for the full model (model presented in 2023) was also included for comparison to last year (Table 6.4-1). Results are presented from the final response model unless otherwise stated. In contrast, the walking behaviour included caribou group size, whether a disturbance occurred, Road status, and the interaction between season and side of Road.

The estimates and significance levels for the full model that used response behaviour as the dependent variable are presented in Table 6.4-1. This model is consistent with the model created in the 2023 analysis and contains the predictors of interest. Due to poor model fit, and the not significant values for the interaction term and several predictor terms a new final model was fit for 2024 (Table 6.4-3). This final model that used response behaviour as the dependent variable was used throughout the results section, for pairwise comparison, and was the best fitting model after model selection. The final model that used walking behaviour as the dependent variable is displayed in Table 6.4-2, and the final model that used duration of response as the response variable in Table 6.4-4.

In Tables 6.4-1, 6.4-2, and 6.4-3, the statistics presented include the type of term in the model (fixed vs random effects), and variable estimate (Odds Ratio), which can be interpreted as the expected effect on the dependent variable as the independent variable changes. Significant p-values (<0.05) for variables with more than two categories were followed up with pairwise post-hoc tests to determine which groups were different. A p-value of less than 0.05 indicates that the variable is an important determinant of the response, as it indicates there was less than 5% probability that we would see an association as strong as we would if there was no relationship.

TABLE 6.4-1 SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR THE FULL RESPONSE BEHAVIOUR MODEL

Effect Type	Variable	Estimate	Standard Error	P-value	Significance
Fixed	Intercept	0.002	0.002		
	Caribou Group Size			<0.001	***
	1-2	Reference	Reference		
	3-25	0.072	0.046		
	26-50	0.044	0.032		
	51-100	0.011	0.009		
	>100	0.023	0.018		
	Disturbance during Interval	7.817	0.451	<0.001	***
	Road Status (Open)	0.974	0.419	0.96	
	Season			-	-
	Summer and Calving	Reference	Reference		
	Fall Migration	0.2	0.182		
	Spring Migration	0.274	0.261		
	Winter	1.666	4.543		
	Side of Road			-	-
	East	Reference	Reference		
	West	0.2	0.25		
	Interaction (Summer and Calving × West)	Reference	Reference	0.05	.
	Interaction (Spring Migration × West)	13.688	19.884		
	Interaction (Fall Migration × West)	16.33	25.565		
	Interaction (Winter × West)	0	0		
Random	Standard Deviation (SD) for Random Effect	3.269			

Notes:

Highly statistically significant p-values < 0.001 are indicated with three asterisks. Statistically significant values < 0.05 and >0.001 are indicated by a single asterisk. Near significant values (0.09 > p > 0.05) are indicated with a dot. No data values are indicated by a hyphen.

TABLE 6.4-2 SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR THE FULL RESPONSE BEHAVIOUR MODEL

Effect Type	Variable	Estimate	Standard Error	P-value	Significance
Fixed	Intercept	0.002	0.001		
	Caribou Group Size			<0.001	***
	1-2	Reference	Reference		
	3-25	0.086	0.046		
	26-50	0.056	0.034		
	51-100	0.014	0.01		
	>100	0.026	0.017		
	Disturbance during Interval	7.512	0.404	<0.001	***
	Temperature	1.039	0.017	0.02	*
Random	Survey ID	3.219			

Notes:
Highly statistically significant p-values < 0.001 are indicated with three asterisks. Statistically significant values < 0.05 and >0.001 are indicated by a single asterisk. Near significant values (0.09 > p > 0.05) are indicated with a dot. No data values are indicated by a hyphen.

TABLE 6.4-3 SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR WALKING MODEL

Effect Type	Variable	Estimate	Standard Error	P-value	Significance
Fixed	Intercept	0.757	0.562		
	Caribou Group Size			<0.001	***
	1-2	Reference	Reference		
	3-25	0.065	0.033		
	26-50	0.04	0.024		
	51-100	0.016	0.01		
	>100	0.007	0.004		
	Disturbance During Interval	1.465	0.055	<0.001	***
	Road Status (Open)	0.309	0.111	0.001	***
	Season			-	-
	Summer and Calving	Reference	Reference		
	Fall Migration	1.373	1.043		
	Spring Migration	0.146	0.117		

Effect Type	Variable	Estimate	Standard Error	P-value	Significance
Fixed *(cont'd)*	Winter	0.105	0.246		
	Side of Road			-	-
	East	Reference	Reference		
	West	0.123	0.118		
	Interaction (Summer and Calving × West)	Reference	Reference	0.003	*
	Interaction (Spring Migration × West)	63.722	72.091		
	Interaction (Fall Migration × West)	5.297	6.526		
	Interaction (Winter × West)	7.527	22.111		
Random	Standard Deviation (SD) for Random Effect	3.17			

Notes:

Highly statistically significant p-values < 0.001 are indicated with three asterisks. Statistically significant values < 0.05 and >0.001 are indicated by a single asterisk. Near significant values (0.09 > p > 0.05) are indicated with a dot. No data values are indicated by a hyphen.

TABLE 6.4-4 SUMMARY OF MODEL COEFFICIENTS AND SIGNIFICANCE LEVELS FOR DURATION OF RESPONSE MODEL

Variable	Hazard Ratio	95% Confidence Interval	P-value	Significance
Number of Disturbances [a]	0.89	0.82-0.97	0.008	***
Caribou Group Size:			0.04	*
Caribou group size 1-2	Reference	Reference		
Caribou group size 3-25	0.63	0.45-0.89		
Caribou group size 26-50	0.57	0.36-0.90		
Caribou group size 51-100	0.65	0.39-1.09		
Caribou group size >100	0.52	0.32-0.82		

Notes:

Highly statistically significant p-values < 0.001 are indicated with three asterisks. Statistically significant values < 0.05 and >0.001 are indicated by a single asterisk. Near significant values (0.09 > p > 0.05) are indicated with a dot. No data values are indicated by a hyphen.

[a] Number of 3-minute intervals during which a disturbance occurred. The same source of disturbance may occur over several intervals.

6.4.2 EFFECT OF DISTURBANCES

Both the final response model and walking model indicate that whether a disturbance occurred during an interval was a significant predictor of the proportion of animals that exhibited a response behaviour. In the final model for response behaviour alone, the Odds Ratio is 7.51 which indicates that the odds that the response behaviour occurs in intervals containing a disturbance, averaged across group size, and temperature, are 751% times higher (Table 6.4-2). In the model with walking behaviour included there is an odds ratio of 1.47 which indicates there are 147% higher odds of exhibiting this behaviour in intervals where a disturbance occurred (Table 6.4-3). This indicates that walking may be less associated with disturbance than the other response behaviours.

6.4.3 EFFECT OF GROUP SIZE

Both models also indicate that caribou group size was significantly associated with the proportion of caribou exhibiting response behaviour. Post-hoc pairwise test results are illustrated in Figures 6.4-1 and 6.4-2. The shaded grey bars indicate the 95% confidence intervals around the estimates of average proportion of caribou exhibiting response behaviour. The points indicate the means (averaged over whether a disturbance occurred) and the green arrows the pairwise comparisons among groups. Where these arrows do not overlap indicates a significantly different response between the groups.

For the final response model, the smallest group size had the largest proportion of response behaviour, and this was different from all other group sizes. All other pairwise comparisons were not significant. In comparison, the smallest group size had the largest proportion of response and walking behaviour in the walking model and significantly differed from all other groups (Figure 6.4-1). Additionally, the 3-25 group size significantly differed from the 51-100 and <100 group sizes, and the 26-50 group size significantly differed from the >100 group size (Figure 6.4-2a). The proportion of response and walking behaviour continued to decrease as the group size increased.

6.4.4 EFFECT OF ROAD CLOSURE STATUS

Road closure status was not a significantly important predictor of response behaviour but was significantly associated in the walking model where response and walking behaviours were combined (Table 6.4-3). Exploratory analysis suggests that caribou respond similarly to disturbances regardless of whether the Road is open or closed (see Figure 6.3-4). This may be because the analysis included convoy surveys, which occurred during Road closures and had the potential to bias the results. There are typically fewer disturbances during Road closures. The lack of importance may also reflect that other variables in the model better explain the variation in the data. However, when walking is included, there was a lower proportion of animals showing a response when the Road was open (Table 6.4-3). This may be due to closures occurring mainly during peak migration times when animals are walking.

FIGURE 6.4-1 PAIR WISE COMPARISONS OF AVERAGE PROPORTION OF CARIBOU EXHIBITING RESPONSE BEHAVIOUR AMONG CATEGORIES OF CARIBOU GROUP SIZE

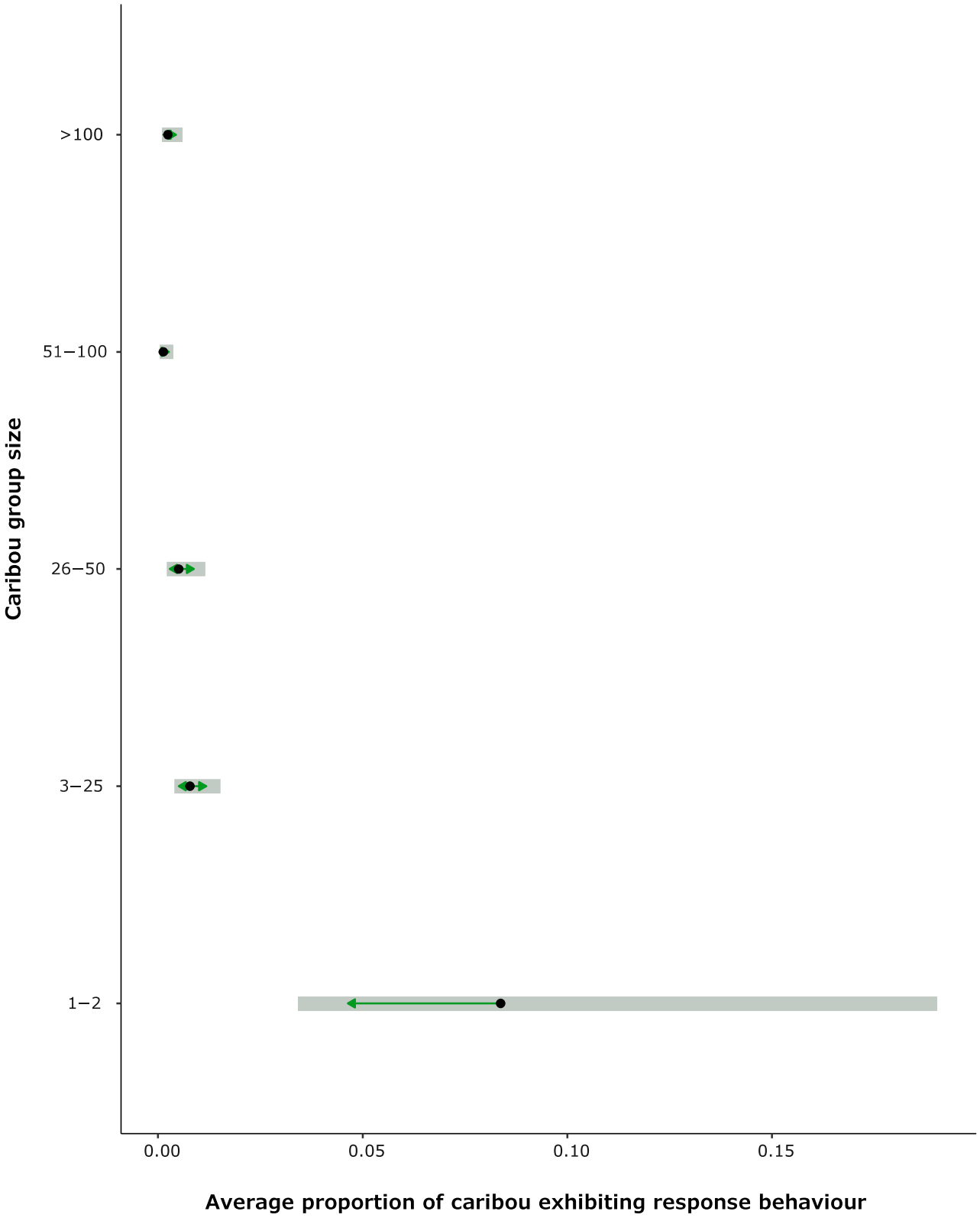
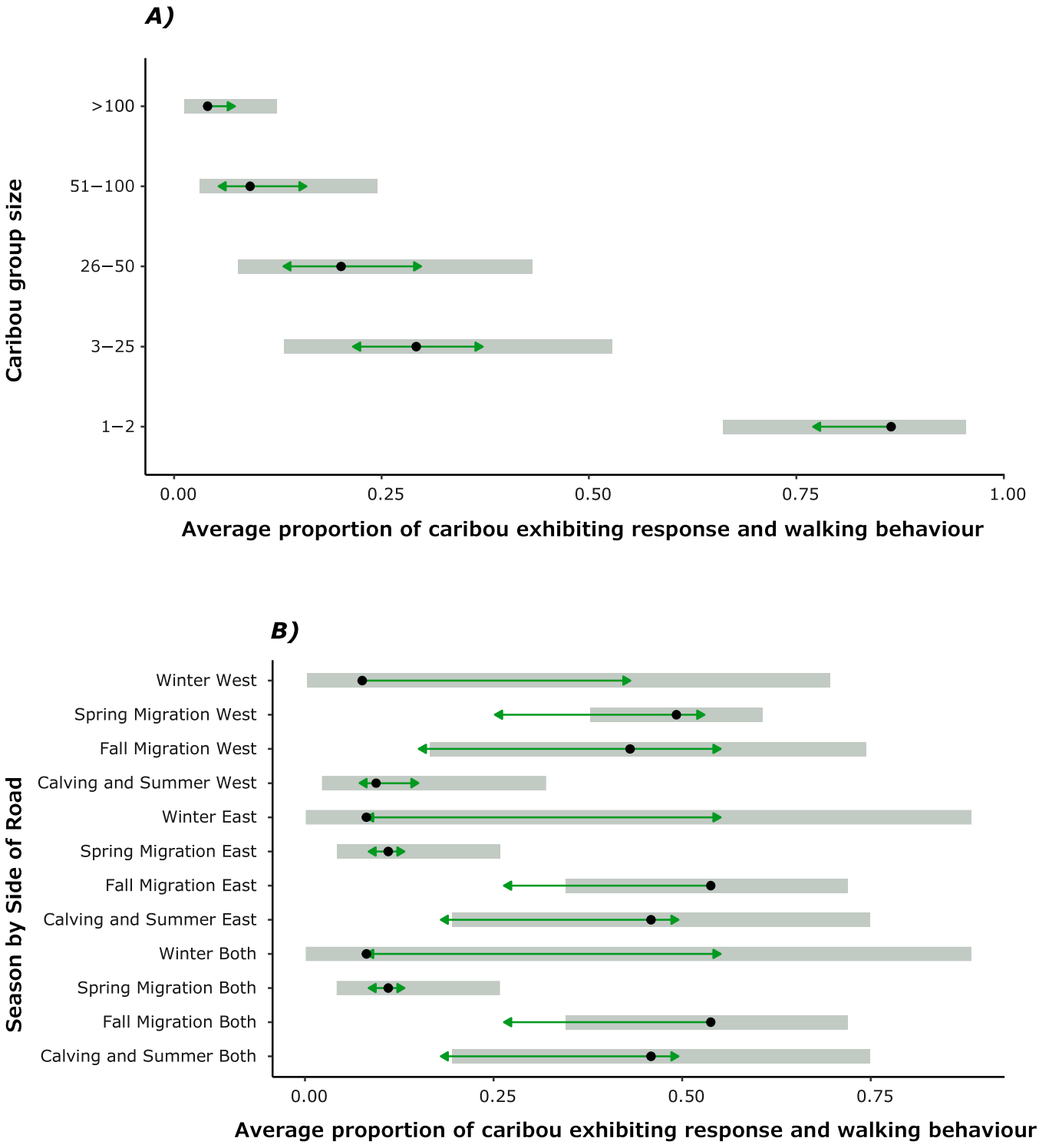


FIGURE 6.4-2 PAIR WISE COMPARISONS OF AVERAGE PROPORTION OF CARIBOU EXHIBITING RESPONSE AND WALKING BEHAVIOUR AMONG CATEGORIES OF CARIBOU GROUP SIZE AND ROAD STATUS



6.4.5 EFFECT OF SEASON AND SIDE OF THE ROAD (UPSTREAM/DOWNSTREAM)

Season and side of the Road was significant in the walking model but was not a predictor in the response behaviour model (Tables 6.4-1, 6.4-2, and 6.4-3). Walking model results indicate that during spring migration caribou are walking less on the east side of the Road compared to the west side of the Road (pairwise post-hoc p-value = 0.003). Since west is upstream of the typical direction of movement in spring, and downstream in fall, another way to interpret this result is that caribou tend to be walking more on the upstream side of the Road during the spring migration. Pairwise comparisons found that the average proportion of caribou exhibiting response and walking behaviour was significantly higher on the upstream (west) side of the Road during spring migration (Figure 6.4-2b). In contrast during the summer calving period the average proportion of caribou exhibiting response and walking behaviour was significantly higher on the upstream (east) side of the Road compared to the downstream side of the road in the same season (Figure 6.4-2b). Pairwise analysis indicated that there was not a significant difference in proportion in the fall migration. This difference in walking behaviour may also be attributed to increased movement during caribou migration periods.

6.4.6 EFFECT OF TEMPERATURE

The final response model indicated that temperature was a significant predictor of the proportion of caribou showing response behaviour (Table 6.4-2). Exploratory figures show that the proportion of caribou showing response behaviour remains consistent until approximately 10°C at which point it increases (Figure 6.4-3a). This may be driven by two groups displaying 100% response behaviour at approximately 20°C. It should be noted that this also may be related to increased insect activity which causes caribou to move at a greater proportion to avoid insects (Mörschel & Klein 1997).

6.4.7 DURATION OF RESPONSE

Table 6.4-4 provides the model summary for the duration of response model. The median number of survey intervals with a disturbance was 0, with a mean of 0.9, and a maximum of 6. The final model included the number of disturbances that occurred during the survey, and the group size. The estimated term (the hazard ratio) for the number of disturbances being less than one indicates a longer duration of response for increasing numbers of disturbances. The model also indicates that larger groups of animals took significantly longer to return to normal compared to the smallest group size (1-2 animals).

Cox's proportional hazards modelling using all five years of data indicates that following a single disturbance event, the probability of returning to normal behaviour within 6 minutes is 92% and 100% after 15 minutes (Table 6.4-5). The probability of returning to baseline behaviour within 6 minutes is lower for larger groups, and surveys with more than one disturbance – 86% for intervals with 2-3 disturbances and 84% for groups with >100 individuals (Table 6.4-5; Figure 6.4-3).

FIGURE 6.4-3 CUMULATIVE PROBABILITY OF RETURN TO NORMAL BEHAVIOUR BY GROUP SIZE AND NUMBER OF DISTURBANCES

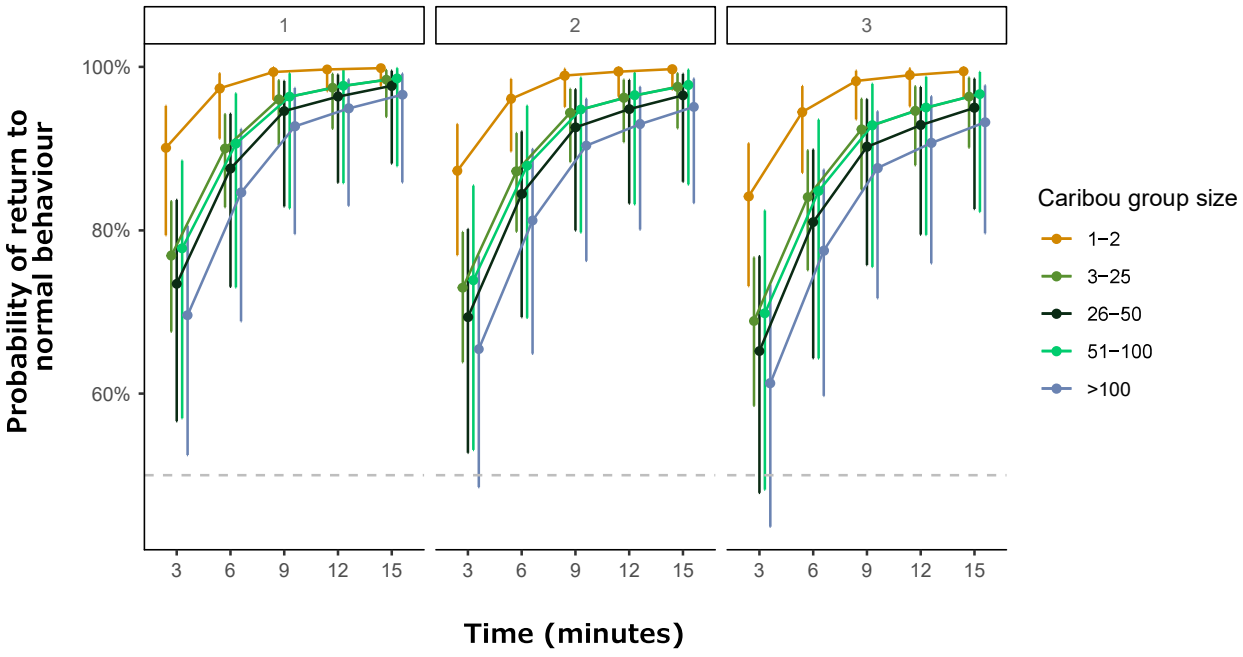


TABLE 6.4-5 PROBABILITY OF RETURNING TO NORMAL BEHAVIOUR WITHIN A CERTAIN TIME BY GROUP SIZE AND NUMBER OF DISTURBANCES

Variable	Time to Return to Normal Behaviour			
	3 Minutes	6 Minutes	9 Minutes	15 Minutes
Caribou Group Size:				
1-2	87% (74%, 94%)	93% (81%, 97%)	100% (-,-)	-
3-25	76% (66%, 83%)	86% (77%, 91%)	90% (81%, 95%)	97% (88%, 99%)
26-50	63% (41%, 76%)	88% (69%, 95%)	97% (78%, 100%)	97% (78%, 100%)
51-100	73% (46%, 86%)	95% (69%, 99%)	95% (69%, 99%)	-
>100	66% (45%, 79%)	84% (65%, 93%)	91% (72%, 97%)	94% (76%, 98%)
Number of Survey Intervals with a Disturbance:				
1	76% (67%, 82%)	92% (86%, 96%)	98% (92%, 99%)	99% (93%, 100%)
2-3	76% (65%, 84%)	86% (75%, 92%)	93% (83%, 97%)	97% (85%, 100%)
>3	69% (51%, 81%)	79% (62%, 89%)	87% (71%, 94%)	92% (77%, 97%)

Note:

Numbers represent the estimated proportion of groups returning to baseline behaviour within the time interval and the 95% confidence intervals.

6.4.8 STATISTICAL ANALYSIS SUMMARY

The results of the statistical analysis provided support for the key hypothesis that caribou tend to respond to disturbances, however, indicated that distance to Road was not a significant predictor of response. The proportion of caribou responding was linked to disturbance occurring within an interval, for both walking and response behaviours. However, caribou were significantly more likely to be walking on the upstream side of the Road. The results indicate that the walking behaviour should not be excluded from the analysis as the inclusion of a separate model including walking behaviour allows for the detection of trends that are not apparent with the "behaviour response" only model.

These results should be treated with caution due to the high number of variables and the variability in the behaviours observed. Nevertheless, it should be noted that the results from this analysis are highly similar to results from previous years, indicating that the effects are stable year to year. These results are also consistent with other surveys recorded on barren-ground caribou during the post-calving and early summer periods, which indicate that caribou behavioural responses to all-season haul roads tend to taper off beyond approximately 500 m (Curatolo et al. 1986; Johnson and Lawhead 1989; Dyer et al. 2001). However, zone of influence estimates are highly variable in the literature and this method of data collection is not designed to estimate the zone of influence, particularly given the observability bias noted in Section 6.3-1. In addition, responses to roads and infrastructure have previously been linked to increased harvest from roadways (Plante et al. 2018; Russell and Gunn 2019), a factor which was not included in this analysis.

7. SUMMARY

The caribou behaviour monitoring data collected in 2024 was combined with previous survey data (2020-2023), to determine factors to predict caribou behaviour near the Mine, and to document caribou response to stressors. All results outlined in this report use all five years of data, unless otherwise stated.

Survey effort was similar to 2023 survey effort in terms of both the total number of surveys and seasonal distribution of surveys. No notable deficiencies were noted in terms of the survey effort in 2024. Furthermore, 2024 surveys were well distributed across various variables of interesting including group sizes, the presence of disturbances, season, and road condition. Groups of caribou were observed on both the east and west sides of the road in all seasons, but groups were more commonly observed on the west side during spring migration and the east side during fall migration (i.e., upstream of the dominant direction of travel). This finding is consistent with previous years results.

In 2024 caribou predominantly exhibited non-response behaviors during surveys, these were standing, laying, feeding, and walking. Across all five years of data 49% of surveys contained a disturbance event and following a disturbance event, the proportion of response behaviours in a group of caribou was significantly higher. Groups generally returned to baseline behaviours within six minutes. Both the number of disturbances experienced, and the caribou group size influenced the amount of time it took for caribou to return to baseline behaviour. Cox's proportional hazards modelling suggests indicates that following a single disturbance 92% of groups would return to baseline behaviour after six minutes and 98% of groups would return to baseline behaviour after 9 minutes.

Results from GLMMs and exploratory analysis indicated that the distance of caribou to the Road and group size were not correlated with the number of road crossings observed. Nor was the distance of caribou to the road or road status a significant predictor of the proportion of caribou displaying response behaviour. The proportion of caribou exhibiting response behaviours was statistically related to differences in caribou group size, the occurrence of a disturbance event, and temperature.

In response to comments from the KivIA, the behaviour of "walking" was investigated for whether it may be a response behaviour instead of a non-response behaviour. The proportion of caribou displaying walking behaviour was influenced by the occurrence of a disturbance during a survey interval similar to the findings of the response behaviour model. In contrast, a positive correlation was found between the road being open and caribou displaying walking behaviour which is consistent with the findings in 2023. Additionally, it was found that caribou were more likely to be walking on the upstream side of the road during the spring migration.

Based on commitments in the TEMP, the overall objective of the caribou behaviour monitoring program was to determine if caribou activity budgets changed with distance from the Mine, and to document caribou response to stressors. The primary hypothesis of this study was that caribou closer to the road would demonstrate a stronger response to vehicle disturbances. Overall, the results of the statistical analysis provided mixed support for this hypothesis, as caribou tended to

respond to disturbances, however, response behaviour did not differ with the distance from the Road. The analysis also found that response to disturbance typically returned to baseline levels within approximately six minutes post-disturbance (for one disturbance), indicating that caribou behaviour returns to baseline relatively quickly following a disturbance. The updates applied to the survey protocol in previous years were helpful in improving the overall quality of the data, and precision of the analyses. Interestingly, even with these changes, the trends in the results were highly consistent between the five years of data. This increases the confidence that trends are repeatable year to year.

8. REFERENCES

Agnico Eagle. 2020. *Agnico Eagle Meadowbank Division Terrestrial Ecosystem Management Plan (TEMP), Version 8*.

Burnham, K.P. and D.R. Anderson. 2004. "Multimodel inference: understanding AIC and BIC in model selection. *Sociol. Methods Res."* 33, 261–304.

Curatolo, James A. and Stephen M. Murphy. 1986. "The effects of pipelines, roads, and traffic on the movements of caribou, *Rangifer tarandus*." *The Canadian Field-Naturalist* 100(2):218-224.

Dyer, S., J. O'Neill, S. Wasel, and S. Boutin. 2001. "Avoidance of Industrial Development by Woodland Caribou." *The Journal of Wildlife Management* 65(3), 531-542. doi:10.2307/3803106.

GN DoE. 2021. *Review of Caribou Group Size Data for the Meadowbank All-Weather-Access-Road (AWAR) and Whale Tail Haul Road (HR): Progress Report to the TAG*. Presentation delivered to the Terrestrial Advisory Group February 2021.

GNWTENR. 2017. Caribou behaviour monitoring field protocols. Government of the Northwest Territories Environment and Natural Resources, 10 page unpublished document. Yellowknife, NT.

Johnson, C. B. and B. E. Lawhead. 1989. *Distribution, Movements, and Behavior of Caribou in the Kuparuk Oilfield, Summer 1988.* Report by Alaska Biological Research, Inc., to ARCO Alaska, Inc., and the Kuparuk River Unit, Anchorage, Alaska.

Mörschel, F. M., & D. R. Klein. 1997. "Effects of weather and parasitic insects on behavior and group dynamics of caribou of the Delta Herd, Alaska." *Canadian Journal of Zoology* 75(10): 1659-1670.

Nagy, J.A. and M.W. Campbell. 2012. *Herd structure, movements, calving grounds, activity periods, home range similarity, and behaviours of migratory and tundra-wintering barren-ground caribou on mainland Nunavut and eastern mainland Northwest Territories, Canada.* Technical Report Series 2012 – No. 01-12. Nunavut Department of Environment, Wildlife Research Section.

Plante, S., C. Dussault, J.H. Richard, and S. Cote. 2018. "Human disturbance effects and cumulative habitat loss in endangered migratory caribou." *Biological Conservation* 224: 129-143.

R Core Team. 2024. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/.

Russell, D. and A. Gunn. 2019. *Vulnerability Analysis of the Porcupine Caribou Herd to Potential Development of the 1002 Lands in the Arctic National Wildlife Refuge, Alaska*. Report prepared for: Environment Yukon, Canadian Wildlife Service, and GNWT Department of Environment and Natural Resources. 143 pp.

APPENDIX A DETAILED METHODS FOR CARIBOU BEHAVIOUR SURVEYS



AGNICO EAGLE

Meadowbank Gold Mine

Caribou Behaviour Monitoring

February 2022

Project No.: 0656774

The business of sustainability

ERM

CONTENTS

1. INTRODUCTION 1
1.1 Objectives 1
2. STUDY AREA 2
3. STANDARD OPERATING PROCEDURES 3
3.1 General Field Data 3
3.2 General Equipment List 4
3.3 Field Methods 4
3.3.1 Group Selection 4
3.3.2 Selection of an Observation Site 5
3.3.3 Data Recording 5
3.3.4 Behaviour Classification 7
4. DATA MANAGEMENT 8
5. CLOSURE 9
6. REFERENCES 10

APPENDIX A MEADOWBANK GOLD MINE: CARIBOU BEHAVIOUR MONITORING DATA SHEET

1. INTRODUCTION

Agnico Eagle Mines Ltd. (Agnico Eagle) would like to determine whether caribou behaviour changes in response to mine activities. The purpose of caribou behaviour surveys is to provide information to characterize the effects of the physical road and mine-related activities on caribou behaviour, including the All Weather Access Road (AWAR) and Haul Road.

The planned monitoring program is designed to collect data on caribou behaviour using standardized, scientifically-defensible methods. The data will be used to monitor Project effects.

1.1 Objectives

Following discussions with the Kivalliq Inuit Association and Government of Nunavut during the spring of 2021, the objectives of the behaviour monitoring program for caribou have been updated to the following:

- Evaluate the baseline behaviour of caribou (behaviour in the absence of disturbance);
- Evaluate the response of caribou to disturbances;
- Compare the behaviour of caribou between the following categories, if there is sufficient data:
    1) in large vs. small groups,
    2) near vs. far from the road,
    3) when the road is open vs. closed,
    4) east vs. west of the road, (upstream and downstream), and
    5) spring migration vs. summer and fall periods.

2. STUDY AREA

The study area for behaviour monitoring is anywhere that caribou may interact with the mine, including the All Weather Access Road (AWAR), the Meadowbank Mine site, Whale Tail site and the Haul Road connecting Meadowbank to Whale Tail.

3. STANDARD OPERATING PROCEDURES

The purpose of caribou behaviour surveys is to provide information to characterize the effects of the physical road and mine-related activities on caribou behaviour, including the All Weather Access Road (AWAR) and Haul Road. The overall method for the surveys is to identify caribou groups visible from the road, to select some groups for observation, and to record the behaviour of individuals in groups of different sizes including their behaviour without any disturbance and responses to both mine-related activities and natural factors.

Notes to guide the work include:

- Systematic surveys will be conducted along all Project roads during spring, summer and fall periods.
- The survey team will consist of a driver/observer and a second observer when available.

Surveys should be performed:

- During spring, summer and fall when caribou may be in the Project area,
- Of caribou at various distances from the road and group sizes, and
- If surveying effects of a convoy, conduct two surveys, one at least an hour before convoy deployment so that a pre-disturbance measurement can be made, and a second survey during the convoy passing by caribou.

3.1 General Field Data

For each survey day, the appropriate general field data will be recorded onto field data sheets supplied in Appendix A and B. A new data sheet will be used for each survey, including additional sheets as necessary to record all observations. General information includes:

- Survey date and start and end times.
- Field personnel (full names on the data sheet header and initials thereafter).
- Weather conditions during and prior to sampling (e.g., snow in the last 24 hours, current wind conditions).
- Site description: provide location and description (GPS coordinates, road name and distance marker).
- Photographs or video (if possible):
    - Take a photo of the caribou every time an observation is recorded so that the observations can be verified by a biologist.
    - For any photographs taken, record the picture IDs in the comments field on the field data sheet.
    - Write descriptions of any photos taken for specific reasons.
- General observations/notes of the environment/sampling procedures.
- Any deviation from the SOPs outlined below.

Note: When in doubt take pictures and make field notes explaining the situation, your response or consequent changes in methods. It is better to have more data/notes than not enough when interpreting the results later on.

3.2 General Equipment List

- A GPS unit with waypoints of road km markings.
- Field data sheets (Appendix A and B), clipboard, pencils, or iPad with data form.
- A timer capable of alarm setting for repeat time intervals (i.e., can be set to go off every three minutes, like a smart phone).
- Binoculars or spotting scope.
- Compass (or use compass function on GPS unit).
- Portable weather station (temperature and wind speed).
- Camera.
- Rangefinder.

3.3 Field Methods

3.3.1 Group Selection

The survey day will begin with a reconnaissance survey to determine how many caribou groups are present near the road, how large they are, and where they are. This will be accomplished by driving from the mine site along the road and noting relevant information about the groups and their sizes along the way (using the standard, tablet-based road survey form). Observers will preferentially choose groups to survey to across group sizes and distances from the road. Ideally, caribou would be sampled in an even distribution across these variables and along the AWAR and Haul Road. However, the nature of caribou and field sampling mean that observers may need to survey what caribou are available, rather than what is "ideal".

Allow approximately one hour to survey each group. If the length of the survey day permits all groups to be surveyed then they should all be surveyed. If there are more groups to survey than the time in the day, then do the following:

1. Look at how many of each group size (bullet list below) have been surveyed to date. If one of them is under-represented and there is a group of that size on the road, then go survey that group. If there is more than one group of that size, choose it randomly using the procedure in step 4.
    - 1 or 2 caribou
    - 3 to 25 caribou
    - 26 to 50 caribou
    - >50 caribou
2. During 2020, few groups of caribou within 300 m of the road were observed or sampled. Preferentially choose groups of caribou within 300 m of the road, with a soft target of approximately 1/3 of samples in this area.
3. If any Project-tolerant caribou are observed (e.g., caribou observed near the road or mine site for more than 72 hours in summer and 48 hours in other seasons; TEMP 2020), then select these animals for sampling. In Appendix A data sheet, record that the group is Project tolerant in the notes field.
4. If there are multiple groups available, choose groups to fill in an even distribution of group sizes and distances from roads.

Record all caribou groups observed during the reconnaissance survey in the standard, tablet-based survey form and submit that data along with the results of behaviour monitoring.

3.3.2 Selection of an Observation Site

Find a safe parking location and follow site safety protocols. The observation location may be the vehicle itself or a safe location off the road. If observers exit the vehicle, the observation location should be chosen where observer activity is not likely to influence caribou behaviour and where the observer can remain comfortable for a period of approximately 45 minutes without needing to move. Ideally, the vehicle should be stopped a minimum of ~250-300 m from the caribou – adapt this distance as needed. If the animals are staring at the truck or moving away, then the truck is too close.

3.3.3 Data Recording

Allow 15 minutes between arrival and the time at which behavioural observations begin. This is to allow animals to return to behaviour that may have been interrupted by the arrival of observers. In the time before recording behaviour, fill in the top portion of the form with location, weather, and group size information.

After 15 minutes, begin recording data in the form in Appendix A. The start time to record is the time that observations begin.

3.3.3.1 Location

Location: Collect a waypoint of the location from which the observations will be made. Note the waypoint number and the UTM coordinates on the data sheet.

Road Status: If observing caribou on a road, record whether the AWAR or Haul Road are open or closed.

Distance from observer to caribou: Estimate the distance to the group using a laser rangefinder and, using a compass or the GPS unit compass feature, record the bearing (0° to 360°) to the group being observed. If the group of caribou is large and spread over a considerable distance from the road, estimate the distance to nearby caribou and the caribou furthest away that will be sampled. If some caribou in the group are too far away to sample, then do not include them in the distance estimate.

Distance from road to caribou: If caribou are closer to the road than to the observer, as is the case when the observer vehicle is stopped at a distance, visually estimate the distance from the road to the group.

East vs. West: Note if the group is on the east or west side of the road. At the end of the 30 minute observation period return to the top of the form and record (Y or N) if the group crossed the road during the survey period. If monitoring at the mine site or Whale Tail, leave this section blank.

Direction of Travel: Note if caribou are moving parallel to the road, perpendicular to the road, or are stationary.

3.3.3.2 Weather Conditions

Use the portable weather station to record:

- Air temperature;
- Wind speed;
- Wind direction;
- Precipitation; and
- Humidity (if the weather station has this function).

3.3.3.3 Road Structure

At the location of the caribou group, record the road characteristics:

- Height of the road above the tundra (m);
- Slope of the road side (with of the slope in m);
- Approximate height of snow bank (m); and
- Any structures, such as bridges, present.

3.3.3.4 Caribou Behaviour

Individuals in the group being observed will be categorized when the survey starts and at three minute intervals. Standardized behaviour categories will be used (Section 3.3.4). The standardization of behaviour is necessary for clarity and data analysis. If the observed behaviour does not fit within any of the categories then observers have the option of noting other behaviour in the comments field. However, this should be used only rarely as most behaviour should fit in the primary categories listed below.
If noting a new/different behaviour, please take a photo or video of the caribou.

The data to record at each three-minute interval are the numbers of individuals in the group exhibiting each behaviour at that time. Do not attempt to characterize the behaviour that occurred during the interval. If the group is too large to be counted in each interval, choose an identifiable subset of the group, count the individuals exhibiting each behaviour at each time interval, and add a comment that a subset of the group was sampled. For clarity, observers should record zero values for behaviours not observed.

Indicate the total group size at the top of the data form, not the size of the subset whose behaviour was recorded. Count the number of caribou up to 100 animals, and then record group size in categories above 100; 100-200 animals, etc. (see Appendix A).

Practically, the easiest way to do this is to have the observer scan across the group of caribou from Left to Right, calling out the behaviour of each animal, while the recorder adds tick marks to the data sheet. When complete, count up the tick marks.

Sex: Note the sex of the group. This can be difficult in large groups, so record in the following categories: mostly males, mostly females, mostly females with calves, juveniles, or mixed group.

3.3.3.5 Disturbance Events

Caribou behaviour is expected to vary in response to some disturbance events. The bottom of the data form should be used to record any potential disturbance events evident to the observer regardless of whether caribou respond to them. The main categories of events are included in the data sheet:

- Light truck;
- Haul truck;
- Road maintenance vehicle (e.g., grader);
- ATV or skidoo;
- Aircraft; and
- Predator (note species).

Record the number and approximate speed of the vehicle (regular driving speed, or moving slowly, ~10 km/h, past caribou).

Record the time of the disturbance event (0:00 to 30:00 of the survey), indicate which type of disturbance was observed in the appropriate column. Record any additional comments and records of photographs taken in the final column.

Record whether the vehicle stopped when approaching caribou or continued to drive slowly. If possible, coordinate with passing vehicles on the road to have some vehicles stop for 10 minutes, and others drive by slowly.

3.3.4 Behaviour Classification

With the exception of Alert behaviour, the primary behaviour categories and their definitions follow classifications from the Government of Northwest Territories (GNWT 2017). The categories appear as columns on the data form, with descriptions on the form. The behaviour categories are:

- **Feeding –** standing or walking posture, with the muzzle touching or nearly touching the ground; can be ingesting food or not; head down or moving from side to side.
- **Lying down –** bedded on the ground, either upright or lying on its side, in a resting or ruminating position.
- **Standing –** stationary in an upright, standing posture with head elevated above the ground, and usually above the knees; if cow is nursing, if possible record the time spend nursing.
- **Alert –** head up scanning horizon or focused on a source of disturbance (e.g., vehicle, predator, human).
- **Walking –** similar to standing posture but moving at a slow gait (<5 km/h).
- **Trotting/running –** similar to standing posture but moving rapidly in symmetrical or asymmetrical gait.

Other behaviours that may be observed (record in comments field on form) are:

- **Nursing –** calf is suckling cow.
- **Sparring –** two males in contact.
- **Insect response behavior –** twitching, stamping, tossing head.

In the comments, record if any animals are moving towards the road, parallel or away from the road.

4. DATA MANAGEMENT

Please scan all data sheets at the end of the day. Data from behaviour surveys should be entered into Excel. Data from group selection surveys (standard tablet data form) and behaviour surveys should be delivered at the end of each month to ERM for QA/QC.

5. CLOSURE

This SOP has been produced for Agnico Eagle Meadowbank Division by ERM Canada. Please contact the authors with any questions.

DRAFT

Nina Morrell, MSc
Wildlife Biologist, Statistician
Nina.Morrell@erm.com

DRAFT

Dr. Greg Sharam
Technical Director, Wildlife
Greg.Sharam@erm.com

6. REFERENCES

GNWT-ENR. 2017. *Caribou behaviour monitoring field protocols.* Government of the Northwest Territories Environment and Natural Resources, 10 page unpublished document. Yellowknife, NT.

TEMP. 2020. Meadowbank Division. Terrestrial Ecosystem Management Plan. Version 8, April 2020

Meadowbank Gold Mine: Caribou Behaviour Monitoring Data Sheet

Date:	Time (24 hr [00:00 to 24:00]) Start:		End:
Observers:			
Location Waypoint number:	UTM Easting:	UTM Northing:	Road name and distance marker:
Distance from caribou to observer location (use rangefinder):	Bearing:		Distance from caribou to road (if different):
Is group location East or West of the Road at start of survey? Circle one: **E W**	Did the group cross the road during the survey? Circle one: **Y N**		
Caribou group size: Exact count (up to 100): _____ Estimated size for larger groups. Circle one: **101-200 201-500 501-1000 >1000**			
Record sex of group (mostly males, females, females with calves, mostly juveniles, or mixed group):			
Record direction of travel as parallel, perpendicular, or stationary relative to road:			

Temperature: ___°C Wind speed: _____km/h Wind direction:_____° Humidity:_____% Days since last snow or wind event: _____			
Weather observations:			
Road: Open? Closed? Road Height:	Road Side Width:	Structures/snowbank Present:	

Observation time from start of survey	Number of animals exhibiting each behaviour type						Comments and photo numbers (Note if any caribou crossed road or travelled along road)
	Feeding	Lying Down	Standing	Walking	Alert	Trotting or running	
0 minutes							
3 minutes							
6 minutes							
9 minutes							
12 minutes							
15 minutes							
18 minutes							
21 minutes							
24 minutes							
27 minutes							
30 minutes							

Observed disturbance events

(record time from start of survey and check type of disturbance. Record whether vehicle stopped (s) or drove slowly (d) past caribou)

Time from start of survey	Light truck	Haul Truck	Road maintenance vehicle (e.g., grader)	ATV	Aircraft	Predator (note species)	Comments and photo numbers. Note other disturbances here

Categories and Definitions of Behaviour[1]:

- **Feeding –** standing or walking posture, with the muzzle touching or nearly touching the ground; can be ingesting food or not; head down or moving from side to side.
- **Lying down –** bedded on the ground, either upright or lying on its side, in a resting or ruminating position.
- **Standing –** stationary in an upright, standing posture with head elevated above the ground, and usually above the knees; if cow is nursing, if possible record the time spend nursing.
- **Alert –** head up scanning horizon or focused on a source of disturbance (e.g., vehicle, predator, human).
- **Walking –** similar to standing posture but moving at a slow gait (<5 km/h).
- **Trotting/running –** similar to standing posture but moving rapidly in symmetrical or asymmetrical gait.

Other behaviours that may be observed (record in comments field on form) are:

- **Nursing –** calf is suckling cow.
- **Sparring –** two males in contact.
- **Insect response behavior –** twitching, stamping, tossing head.

[1] Primary source: GNWT-ENR 2017 caribou behaviour monitoring field protocols, courtesy of GNWT Yellowknife, NT.

APPENDIX B MEADOWBANK COMPLEX CARIBOU BEHAVIOUR SURVEY DATA SUMMARY, 2020 TO 2024

APPENDIX B: MEADOWBANK COMPLEX CARIBOU BEHAVIOUR SURVEY DATA SUMMARY, 2020 TO 2024

Caribou Group Size	Total Surveys (All Years)	Total # 2020	Surveys with Disturbance 2020	Surveys with Road Crossing 2020	Total # 2021	Surveys with Disturbance 2021	Surveys with Road Crossing 2021	Total # 2022	Surveys with Disturbance 2022	Surveys with Road Crossing 2022
1-2	67	28	15	1	23	15	0	16	10	1
3-25	142	35	22	1	63	35	2	44	28	3
26-50	60	28	13	2	21	9	0	11	4	0
51-100	38	9	5	0	17	9	0	12	3	1
>100	47	16	13	1	10	6	4	21	5	2
Total	**354**	**116**	**68**	**5**	**134**	**74**	**6**	**104**	**50**	**7**

Caribou Group Size	Total # 2023	Surveys with Disturbance 2023	Surveys with Road Crossing 2023	Total # 2024	Surveys with Disturbance 2024	Surveys with Road Crossing 2024
1-2	10	5	1	15	9	1
3-25	22	6	1	23	13	0
26-50	12	2	2	15	4	0
51-100	10	0	0	12	5	1
>100	16	6	1	5	2	1
Total	**70**	**19**	**5**	**70**	**33**	**3**

APPENDIX C SUMMARY OF SPATIAL DISTRIBUTION OF SURVEY DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

APPENDIX C: SUMMARY OF SPATIAL DISTRIBUTION OF SURVEY DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Season	Surveys of Caribou on East Side of the Mine Infrastructure 2020	Surveys of Caribou on West Side of the Mine Infrastructure 2020	Surveys of Caribou on East Side of the Mine Infrastructure 2021	Surveys of Caribou on West Side of the Mine Infrastructure 2021	Surveys of Caribou on East Side of the Mine Infrastructure 2022	Surveys of Caribou on West Side of the Mine Infrastructure 2022	Surveys of Caribou on East Side of the Mine Infrastructure 2023	Surveys of Caribou on West Side of the Mine Infrastructure 2023	Surveys of Caribou on East Side of the Mine Infrastructure 2024	Surveys of Caribou on West Side of the Mine Infrastructure 2024
Spring Migration	12	46	23	89	13	47	4	34	6	25
Calving/Summer	11	7	3	12	15	12	1	0	2	3
Fall Migration	10	3	1	4	16	6	21	10	20	5
Total	**33**	**56**	**27**	**105**	**45**	**56**	**26**	**44**	**30**	**37**

APPENDIX D DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
1	2020-04-24	15:13	15:43	P.R	BEH1	AWAR KM 7	300-1000	73	West	No	6	-12	15	18	NA	1	Sunny, few clouds
2	2020-04-25	14:25	14:55	P.R	BEH4	AWAR KM 21	300-1000	356	West	Yes	130	-19	3.6	320	33.4	0	Cloudy
3	2020-08-22	12:24	12:54	C.G.P	NA	AWAR KM 29	300-1000	NA	East	No	~150	9	18	NW	59	NA	NA
4	2020-08-17	10:06	10:36	K.P	NA	AWAR KM 31	300-1000	NA	East	No	2	7	25	NE	NA	1	overcast, light rain
5	2020-08-21	11:32	12:02	C.G.P	NA	AWAR KM 29	300-1000	NA	East	No	58	8.7	34	NE	65	NA	NA
6	2020-08-22	11:34	12:04	C.G.P	NA	AWAR KM 28	100-300	NA	East	No	45	9	18	NW	59	NA	NA
7	2020-08-17	9:35	9:48	K.P	NA	AWAR KM 38	>1000	NA	West	No	1	7	25	NE	NA	1	overcast, drizzle
8	2020-08-21	14:37	15:07	C.G.P	NA	AWAR KM 40	300-1000	NA	East	No	101-200	8.7	34	NW	65	NA	NA
9	2020-04-24	17:03	17:15	P.R	BEH2	AWAR KM 40	300-1000	212	West	No	16	-12	10	196	23	1	Sunny, cloulds
10	2020-08-12	14:33	14:39	K.P	NA	AWAR KM 57	300-1000	NA	NA	No	1	17	15	NE	58	NA	NA
11	2020-08-12	12:03	12:33	K.P	NA	AWAR KM 70	>1000	NA	NA	No	212	14	15	NE	NA	NA	overcast
12	2020-08-17	7:55	8:25	K.P	NA	AWAR KM 71	>1000	NA	West	No	2	6	25	NE	NA	1	overcast
13	2020-08-12	11:03	11:20	K.P	NA	AWAR KM 77	>1000	NA	NA	Yes	41	14	15	NW	58	NA	overcast
14	2020-08-12	9:42	10:11	K.P	NA	AWAR KM 82	>1000	NA	NA	No	2	13	15	NW	58	NA	Sunny, partly cloudy
15	2020-08-12	10:13	10:43	K.P	NA	AWAR KM 82	NA	NA	NA	No	36	13	15	NE	58	NA	NA
16	2020-08-15	14:45	15:15	K.P	NA	AWAR KM 84	>1000	NA	West	No	2	19	21	SE	NA	NA	NA
17	2020-05-17	10:00	10:30	D.M	NA	AWAR KM 86	300-1000	90	East	No	2	-5	24	NW	NA	2	NA
18	2020-08-12	16:33	16:53	K.P	NA	AWAR KM 87	300-1000	NA	East	No	1	17	10	SE	58	NA	NA
19	2020-08-15	16:30	17:00	K.P	NA	AWAR KM 87	300-1000	NA	West	No	1	18	15	SE	NA	NA	NA
20	2020-08-12	8:53	9:13	K.P	NA	AWAR KM 87	>1000	NA	NA	No	2	12	9.5	NW	NA	NA	overcast
21	2020-08-15	13:50	14:20	K.P	NA	AWAR KM 91.5	300-1000	NA	West	No	1	17	22	SE	NA	1	NA
22	2020-04-24	19:27	19:57	P.R	BEH3	AWAR KM 94	300-1000	22	West	No	4	-14	10	230	27	0	Light snow
23	2020-05-17	8:50	9:20	D.M	NA	AWAR KM 96	300-1000	90	West	No	~67	-5	24	NW	NA	2	Cloudy
24	2020-08-06	7:10	7:40	K.P	NA	AQ KM 175	0-50	NA	West	No	1	15	30	SE	NA	NA	NA
25	2020-08-17	7:24	7:38	K.P	NA	AWAR KM 79	300-1000	NA	East	No	1	5	NA	NA	NA	1	Slight rain, overcast
26	2020-05-18	9:15	9:45	J.B	NA	End of landing strip	300-1000	0	East	No	35	-9	32	SW	NA	NA	NA
27	2020-05-06	13:20	13:50	J.B	NA	AQ KM 111	>1000	NA	East	No	22	-12	24	N	71	1	Sunny
28	2020-08-16	14:43	15:13	K.P	NA	Haul Rd KM 111	NA	NA	East	No	2	9	55	NW	NA	0	NA
29	2020-05-03	11:45	12:15	K.P	NA	AQ KM 115.5	NA	NA	West	No	10	-8	35	NNE	82	NA	Drifting snow, overcast
30	2020-04-29	16:00	16:30	K.P	NA	Vault laydown KM 114	300-1000	NA	West	No	32	-10.5	42	S	NA	1	blowing snow near the ground
31	2020-05-06	13:59	14:19	J.B	NA	AQ KM 116	>1000	NA	West	No	12	-16	24	N	71	1	Sunny
32	2020-05-04	12:10	12:40	K.P	NA	AQ KM 168	>1000	NA	NA	No	10	NA	55	N	99	NA	Windy, drifting snow and sunny at the end
33	2020-05-02	11:20	11:41	K.P	NA	AQ KM 117	>1000	NA	West	No	9	-6	2	NA	NA	1	Sunny
34	2020-05-06	14:35	15:05	J.B	NA	AQ KM 119	300-1000	NA	NA	No	7	-12	24	N	71	1	Sunny
35	2020-04-29	8:55	9:25	K.P	NA	AQ Hal Rd KM 120	300-1000	NA	West	No	35	NA	NA	N	NA	1	Sunny; drifting snow
36	2020-05-10	12:50	13:20	J.B	NA	AQ KM 119	300-1000	NA	East	No	7	-12	35	N	52	NA	Partly cloudy
37	2020-05-08	10:30	11:00	J.B	NA	AQ KM 117	300-1000	NA	West	No	13	-8	5	N	55	3	Partly cloudy, dusty due to haul trucks
38	2020-04-29	15:00	15:30	K.P	NA	AQ KM 121	>1000	NA	West	No	28	-12.5	32	S	NA	NA	Blowing snow on the road
39	2020-05-10	13:45	14:15	J.B	NA	AQ KM 121	50-100	NA	East	No	1	-12	33	N	55	NA	Partly cloudy
40	2020-05-09	12:50	13:20	J.B	NA	AQ KM 117	300-1000	NA	East	No	1	-15	30	N	60	4	Sunny
41	2020-05-12	11:50	12:20	J.B	NA	AQ KM 124	300-1000	NA	East	No	1	-8	10	NE	65	NA	NA
42	2020-05-01	11:40	12:10	K.P	NA	AQ Rd KM 124	300-1000	NA	West	No	35	-14.5	16	NE	NA	1	NA
43	2020-05-02	10:30	10:45	K.P	NA	AQ KM 124	0-50	NA	East	No	1	-7	1.2	NA	NA	2	Sunny, warm
44	2020-05-12	14:50	15:20	J.B	NA	AQ KM 125	300-1000	NA	West	No	35	-10	25	NE	65	NA	NA
45	2020-05-01	12:30	13:00	K.P	NA	AQ Rd KM 126	NA	NA	East	No	2	-14	17	NW	NA	1	NA
46	2020-05-03	13:00	13:30	K.P	NA	AQ KM 126.5	>1000	NA	West	No	32	-12	25	NNE	82	NA	Windy, cloudy
47	2020-05-01	9:50	10:14	K.P	NA	AQ Rd KM 127	300-1000	NA	West	No	26	-18	9	NW	NA	1	NA
48	2020-05-11	12:10	12:31	J.B	NA	AQ KM 128	300-1000	NA	West	No	23	-10	5	N	67	NA	Cloudy

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
49	2020-05-02	13:00	13:30	K.P	NA	AQ KM 129	NA	NA	West	No	18	NA	NA	NA	NA	NA	Sunny
50	2020-05-03	14:00	14:18	K.P	NA	AQ KM 130	300-1000	NA	NA	No	2	-12	25	NNE	84	0	Light snow, windy, overcast
51	2020-04-29	10:20	10:50	K.P	NA	AQ Hal Rd KM 130	300-1000	NA	West	No	12	-6.1	19	NE	NA	1	Partly cloudy; windy; drifting snow
52	2020-05-09	13:50	14:20	J.B	NA	AQ KM 131	>1000	NA	West	No	25	-12	33	N	40	4	Sunny
53	2020-05-02	13:40	14:10	K.P	NA	AQ KM 132.5	50-100	NA	West	Yes	1	-4	3	NA	NA	1	Sunny
54	2020-05-07	8:49	9:10	K.P	NA	AQ KM 133	300-1000	NA	West	No	19	-13	1.2	SW	70	2	Sunny
55	2020-05-03	14:30	15:00	K.P	NA	AQ KM 134.6	NA	NA	Both	No	28	-5	26	NNE	84	1 to 2	Drifting snow, clearing sky
56	2020-05-07	12:25	12:52	J.B	NA	AQ KM 134	>1000	NA	West	Yes	45	-9	2.5	SW	60	2	Sunny
57	2020-05-10	9:50	10:20	J.B	NA	AQ KM 136	>1000	NA	West	No	32	-15	27	N	70	NA	Partly cloudy
58	2020-05-04	12:50	13:18	K.P	NA	AQ KM 136	300-1000	NA	West	No	47	-10.2	36	N	98	NA	Drifting snow, sunny
59	2020-05-11	13:18	13:30	J.B	NA	AQ KM 137	300-1000	NA	West	No	8	-8	2.5	N	60	NA	Cloudy
60	2020-05-02	14:25	14:55	K.P	NA	AQ KM 136	300-1000	NA	East	No	4	NA	4	NA	NA	1	NA
61	2020-05-04	15:10	15:19	K.P	NA	AQ KM 147	300-1000	NA	NA	Yes	3	-8.5	25	N	99	1	windy and sunny
62	2020-04-29	12:20	12:50	K.P	NA	AQ KM 148	50-100	NA	West	No	14-22	-5	20	NE	NA	1	NA
63	2020-04-30	8:30	8:37	K.P	NA	AQ KM 144	100-300	NA	NA	No	4	NA	60	N	NA	NA	NA
64	2020-04-30	9:00	9:30	K.P	NA	AQ KM 140	300-1000	NA	NA	No	35	NA	60	N	NA	NA	Drifting/blowing snow
65	2020-05-03	10:30	10:45	K.P	NA	AQ KM 161	>1000	NA	West	No	6	-10	26	NW	NA	NA	White out; light snow, overcast
66	2020-04-30	16:30	17:00	K.P	NA	AQ KM 148	>1000	NA	West	No	52	-5	42	N	NA	NA	Sunny; some drifting snow
67	2020-04-29	11:20	11:50	K.P	NA	AQ KM 138	300-1000	NA	West	No	101-200	-6	22	SW	NA	1	Sunny; windy
68	2020-08-07	12:32	13:00	K.P	NA	NA	300-1000	NA	NA	No	>533	15	35	SE	NA	NA	overcast, light drizzle
69	2020-08-06	15:50	16:20	K.P	NA	AQ KM 149	>1000	NA	NA	No	>400	18	45	SE	NA	NA	NA
70	2020-05-01	15:20	15:50	K.P	NA	AQ KM 151	300-1000	NA	West	No	15	-12	21	N	NA	1	Sunny
71	2020-05-06	9:25	9:55	J.B	NA	AQ KM 153	>1000	NA	West	No	15	-16	32	N	60	1	Sunny
72	2020-08-06	14:50	15:20	K.P	NA	AQ KM 156	>1000	NA	NA	No	193	19	40	SF	NA	NA	overcast
73	2020-05-02	16:00	16:12	K.P	NA	AQ KM 161	300-1000	NA	West	No	10	NA	NA	NA	NA	NA	NA
74	2020-05-03	9:00	9:30	K.P	NA	AQ KM 158	>1000	NA	NA	No	65	-10	21.5	NE	82	2	Windy, overcast
75	2020-08-07	9:20	9:50	K.P	NA	KM 154	>1000	NA	NA	No	45	14	10	SE	NA	NA	overcast
76	2020-08-06	10:37	11:07	K.P	NA	AQ KM 106	0-50	NA	East	No	2	24	35	SE	NA	NA	Cloudy
77	2020-08-06	10:40	11:10	K.P	NA	AQ KM 159	NA	NA	East	No	400	24	35	SE	NA	NA	Cloudy
78	2020-05-12	16:50	17:20	J.B	NA	AQ KM 159	300-1000	NA	West	No	72	-10	25	N	64	NA	NA
79	2020-05-03	8:30	9:00	K.P	NA	AQ KM 160	300-1000	NA	East	No	7	-11	21	NNE	80	2	Windy, white out; light snow
80	2020-05-04	16:10	16:40	K.P	NA	AQ KM 160	>1000	NA	West	No	18	-8	35	N	99.9	NA	NA
81	2020-04-30	14:20	14:50	K.P	NA	AQ KM 160	300-1000	NA	West	No	110	-5	32	N	NA	1	Sunny; windy
82	2020-08-09	13:52	13:20	K.P	NA	NA	0-50	NA	NA	No	1	20	30	SE	NA	NA	NA
83	2020-08-07	9:00	9:11	K.P	NA	KM 161	>1000	NA	NA	No	1	14	10	SE	NA	NA	overcast
84	2020-05-07	14:50	15:20	J.B	NA	AQ KM 161	300-1000	NA	West	No	7	-8	5.3	SW	55	2	Sunny
85	2020-05-01	16:50	17:00	K.P	NA	AQ Rd KM 162	100-300	NA	NA	No	62	-12	10	NW	NA	NA	NA
86	2020-05-03	7:40	8:10	K.P	NA	AQ KM 161	>1000	NA	West	No	11	-10	17	NE	77	1	White out; light snow
87	2020-04-29	13:45	14:00	K.P	NA	AQ KM 163	300-1000	NA	West	No	10	-4	35	NE	NA	1	Windy; drifting snow
88	2020-05-03	16:40	15:01	K.P	NA	AQ KM 168	300-1000	NA	East	No	2	-5.5	26	NE	85	NA	NA
89	2020-04-30	11:30	12:00	K.P	NA	AQ KM 167	300-1000	NA	NA	No	20	NA	NA	NA	NA	1	Drifting snow; good visibility; sunny
90	2020-04-29	16:15	16:33	K.P	NA	AQ KM 173	>1000	NA	West	No	23	-3	30	NE	NA	1	Snowy windy
91	2020-04-30	12:20	12:50	K.P	NA	AQ KM 175	100-300	NA	NA	No	2	NA	25	N	NA	1	Sunny; windy
92	2020-04-29	14:40	15:10	K.P	NA	AQ KM 175	>1000	NA	West	No	21	-4	21	NE	NA	1	Snowy
93	2020-05-14	16:30	17:00	J.B	NA	AQ KM 175	300-1000	NA	West	No	4	-5	2.5	N	58	NA	Partly cloudy
94	2020-05-06	7:20	7:50	K.P	NA	AQ KM 160	>1000	NA	NA	No	2	-20	28	NNE	61	1	NA
95	2020-05-06	7:23	7:53	J.B	NA	AQ KM 176	300-1000	NA	West	No	21	-20	28	N	61	NA	NA
96	2020-05-06	17:10	17:40	J.B/K.P	NA	AQ KM 176	>1000	NA	NA	No	32	NA	NA	NA	NA	1	NA
97	2020-05-06	17:20	17:50	J.B/K.P	NA	NA	300-1000	NA	West	No	34	NA	NA	NA	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
98	2020-05-02	7:00	7:30	K.P	NA	KM 175	300-1000	NA	West	No	52	NA	NA	NA	NA	NA	NA
99	2020-05-11	16:15	16:45	J.B	NA	AQ KM 177	300-1000	NA	West	No	50-100	-3	10	N	50	NA	Cloudy
100	2020-08-06	11:25	11:55	K.P	NA	AQ KM 166	NA	NA	NA	No	~300	17	35	SE	NA	NA	started to rain, overcast
101	2020-08-16	16:00	16:30	K.P	NA	AWAR KM 89	300-1000	NA	West	No	2	7	50	NE	NA	0	NA
102	2020-08-22	13:11	13:41	C.G.P	NA	AWAR KM 15	300-1000	NA	East	No	29	9	18	NW	59	NA	NA
103	2020-11-08	12:10	12:40	S.K.	NA	AWAR KM 54	300-1000	SW	West	No	350	-16	7	N	80	4	sunny, light clouds
104	2020-11-08	11:22	11:52	S.K.	NA	AWAR KM 60	100-300	E	East	No	135	-18	11	N	80	4	sunny
105	2020-11-09	9:50	10:20	S.K.	NA	AWAR KM 57	50-100	W	West	No	52	-8	15	SW	91	5	white out - visibility 50m minimum, 300 maximum
106	2020-11-18	10:22	10:39	S.K.	NA	AWAR KM 80	100-300	NA	East	No	27	-17	NA	NA	NA	NA	NA
107	2020-11-19	11:17	11:45	S.K.	NA	AWAR KM 64	100-300	NA	East	No	39	-23	6	WSW	72	NA	partly cloudy
108	2020-11-12	11:00	11:12	K.P.	NA	AWAR KM 77	>1000	NA	East	No	52	-21	10	NW	70	1	NA
109	2020-11-13	11:20	11:50	K.P.	NA	AWAR KM 58	>1000	NA	East	No	212	-14	20	NW	78	0	drifting snow/overcast
110	2020-11-14	9:30	10:00	K.P.	NA	AWAR KM 50	300-1000	NA	East	No	27	-22	27	NW	70	1	overcast, -38 windchill
111	2020-11-14	10:20	10:50	K.P.	NA	AWAR KM 53	>1000	NA	East	No	170	-22	27	NW	70	1	overcast, -38 windchill
112	2020-11-14	11:20	11:50	K.P.	NA	AWAR KM 46	>1000	NA	East	No	28	-22	27	NW	70	2	1/2 overcast, sunny, increasing wind, -38 windchil
113	2020-11-14	12:23	12:53	K.P.	NA	AWAR KM 50.5	>1000	NA	East	No	123	-24	27	NW	70	1	clearing sky, -38 windchill
114	2020-11-14	13:45	14:15	K.P.	NA	AWAR 56	300-1000	NA	East	No	41	-24	27	NW	70	1	clear and sunny, -38 windchill
115	2020-11-15	15:03	15:33	K.P.	NA	AWAR KM 75	>1000	NA	NA	No	31	-26	12	SE	69	2	setting sun, overcast
116	2020-11-15	10:00	10:30	K.P.	NA	AWAR KM 50	>1000	NA	West	No	29	31	12	SE	69	2	NA
117	2021-03-31	9:41	10:11	EF	NA	Amaruq KM 119	>1000	NA	West	No	62	-18	22	NA	NA	0	Cloudy, Wind
118	2021-04-06	16:17	16:45	Kathleen, Krista Kenyon	NA	AWAR KM 72	300-1000	3	West	No	16	-13	30	NA	NA	0	Sunny in the morning, got cloudy around 13:00
119	2021-04-07	10:13	10:50	Louis Dubois	NA	AWAR KM 97	300-1000	90	West	No	52	-17	46	NA	NA	NA	NA
120	2021-04-08	13:46	14:18	Louis Dubois	NA	AWAR KM 103	0-50	90	West	No	18	-15	33	NA	NA	1	NA
121	2021-04-12	16:29	17:05	Krista Kenyon	NA	AWAR KM (N/A)	300-1000	270	East	No	12	NA	NA	NA	NA	NA	NA
122	2021-04-13	9:13	9:51	Louis Dubois	NA	AWAR KM 53	300-1000	90	West	No	63	-26	8	NA	NA	3	NA
123	2021-04-13	9:23	9:54	KAK	NA	AWAR KM 82	>1000	270	West	No	11	-24	20	NA	NA	2	Sunny
124	2021-04-13	11:36	12:10	KAK	NA	AWAR KM 57	300-1000	90	West	No	72	-19	37	NA	NA	2	Was overcast and clear. Weather shifted at start of survey. Visibility dropped and some snow is drifting low over the road. Subsampled to what group was clearly visible.
125	2021-04-13	16:40	17:12	KAK	NA	AWAR KM 85	300-1000	110	West	No	15	NA	NA	NA	NA	NA	NA
126	2021-04-14	5:43	7:16	Louis Dubois	NA	AWAR KM 96	50-100	30	West	No	300	-13	24	NA	NA	NA	NA
127	2021-04-14	6:58	7:33	Louis Dubois	NA	AWAR KM 90	300-1000	45	West	Yes	476	-12	24	NA	NA	NA	NA
128	2021-04-14	11:56	12:31	Louis Dubois	NA	AWAR KM 44	300-1000	80	West	No	76	-9	24	NA	NA	NA	NA
129	2021-04-14	13:40	14:11	Louis Dubois	NA	AWAR KM 72	>1000	90	West	No	70	-1	24	NA	NA	NA	NA
130	2021-04-18	8:34	9:03	KAK	NA	AWAR KM 43	300-1000	90	West	No	52	-18	60	NA	NA	NA	Sunny. Wind Chill -31 deg.
131	2021-04-18	9:04	9:20	KAK	NA	AWAR KM 43	300-1000	90	West	No	52	-18	60	NA	NA	NA	NA
132	2021-04-19	8:00	8:34	Louis Dubois	NA	AWAR KM 53	100-300	45	West	No	6	-17	17	NA	NA	NA	NA
133	2021-04-19	8:45	9:17	Louis Dubois	NA	AWAR KM 52	>1000	90	West	No	6	-17	17	NA	NA	NA	NA
134	2021-04-19	15:49	16:22	Louis Dubois	NA	Amaruq KM 103	0-50	15	East	No	14	-10	17	NA	NA	NA	NA
135	2021-04-19	16:22	16:46	Louis Dubois	NA	AWAR KM 103	300-1000	10	West	No	14	-10	17	NA	NA	NA	NA
136	2021-04-19	16:56	17:11	Louis Dubois	NA	Amaruq KM 103	>1000	10	East	No	8	-10	17	NA	NA	NA	NA
137	2021-04-20	16:39	17:22	BHJ	NA	AWAR KM 105	300-1000	90	West	No	10	-3	8	NA	NA	2	Overcast
138	2021-04-21	13:02	13:42	BHK, MTS	NA	AWAR KM 38	300-1000	310	West	No	83	-3	15	NA	NA	4	Foggy
139	2021-04-22	16:20	16:52	BHJ	NA	AWAR KM 83	>1000	205	West	No	20	-9	20	NA	NA	5	Sunny, clear skies
140	2021-04-23	8:56	9:33	Michael Schumacher	NA	AWAR KM 35	300-1000	270	West	No	62	-14	20	NA	NA	4	NA
141	2021-04-23	9:34	9:40	Michael Schumacher	NA	AWAR KM 35	300-1000	270	West	No	15	-14	20	NA	NA	4	NA
142	2021-04-23	10:17	10:54	Michael Schumacher	NA	AWAR KM 37	300-1000	290	West	No	21	-10	20	NA	NA	4	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
143	2021-04-23	11:11	11:52	BHJ, NS	NA	AWAR KM 12	300-1000	300	West	No	33	-16	10	NA	NA	6	Cloudy
144	2021-04-23	11:15	11:55	Michael Schumacher	NA	AWAR KM 46	100-300	280	West	No	19	-10	20	NA	NA	4	NA
145	2021-04-23	12:41	13:19	BHJ, NS	NA	AWAR KM 26	300-1000	0	West	No	210	-15	20	NA	NA	2	Partly Cloudy
146	2021-04-23	12:45	13:10	Michael Schumacher	NA	AWAR KM 61	300-1000	270	West	No	8	-10	20	NA	NA	4	NA
147	2021-04-23	14:46	15:25	Michael Schumacher	NA	AWAR KM 74	300-1000	315	West	No	9	-10	20	NA	NA	4	NA
148	2021-04-24	7:52	8:41	Michael Schumacher	NA	AWAR 66 KM	300-1000	200	West	Yes	200	-21	26	NA	NA	5	NA
149	2021-04-24	7:52	8:41	Michael Schumacher	NA	AWAR 66 KM	300-1000	200	West	Yes	200	-21	26	NA	NA	5	NA
150	2021-04-25	12:52	13:29	BHJ	NA	AWAR KM 26	100-300	200	West	No	50	-16	20	NA	NA	7	Sunny
151	2021-04-25	14:32	15:04	BHJ	NA	AWAR KM 67	50-100	NA	West	No	27	-15	20	NA	NA	7	Partly Cloudy
152	2021-04-26	8:15	9:00	BHJ	NA	AWAR KM (N/A)	100-300	190	West	No	32	-18	20	NA	NA	8	Partly Cloudy
153	2021-04-26	9:32	9:50	BHJ	NA	AWAR KM 42	100-300	200	West	No	32	-20	20	NA	NA	8	Mostly Sunny
154	2021-04-26	9:52	10:26	BHJ	NA	AWAR KM 42	>1000	210	East	No	32	-20	20	NA	NA	NA	NA
155	2021-04-26	13:54	14:29	BHJ	NA	AWAR KM 58	300-1000	215	West	No	58	-15	20	NA	NA	8	Partly Cloudy
156	2021-04-26	14:51	15:25	BHJ	NA	AWAR 78 KM	100-300	220	West	No	26	-16	25	NA	NA	8	Mostly Sunny
157	2021-04-29	8:06	8:41	Michael Schumacher	NA	Amaruq 119 KM	300-1000	30	Both	Yes	144	-15	30	NA	NA	NA	NA
158	2021-04-29	9:05	9:40	Michael Schumacher	NA	Amaruq KM 119	300-1000	360	East	No	17	-10	30	NA	NA	NA	NA
159	2021-04-29	9:55	10:01	Michael Schumacher	NA	Amaruq KM 119	300-1000	360	East	No	17	-10	30	NA	NA	NA	NA
160	2021-04-29	10:04	10:36	Michael Schumacher	NA	Amaruq KM 119	300-1000	360	East	No	17	-14	30	NA	NA	NA	NA
161	2021-04-29	14:56	14:59	Michael Schumacher, Nicolas Saucier	NA	Amaruq KM 128	300-1000	220	West	No	15	-8	40	NA	NA	NA	NA
162	2021-04-29	15:00	15:03	Michael Schumacher	NA	Amaruq KM 128	300-1000	220	West	No	15	-8	40	NA	NA	NA	NA
163	2021-04-29	15:04	15:31	Michael Schumacher, Nicolas Saucier	NA	Amaruq KM 128	300-1000	220	West	No	15	-8	40	NA	NA	NA	NA
164	2021-04-30	8:46	9:13	KN	NA	AWAR KM 93	300-1000	270	West	No	94	-14	17	NA	NA	2	Sunny
165	2021-04-30	12:12	13:00	Laurence Archambault	NA	Amaruq KM 178	100-300	15	West	No	16	-11	7	NA	NA	2	Sunny
166	2021-05-01	7:21	7:50	KN	NA	AWAR KM 102	0-50	90	East	No	7	-16	41	NA	NA	3	High Winds
167	2021-05-01	8:10	8:44	KN	NA	AWAR 98 KM	100-300	280	East	No	24	-16	41	NA	NA	3	NA
168	2021-05-01	9:09	9:27	Michael Schumacher	NA	AWAR KM 16	>1000	270	West	No	64	-13	37	NA	NA	NA	NA
169	2021-05-01	9:15	9:22	KN	NA	AWAR KM 98	300-1000	280	West	No	24	-16	41	NA	NA	3	Blowing Snow
170	2021-05-01	9:23	9:32	KN	NA	AWAR KM 98	300-1000	280	West	No	24	-16	41	NA	NA	3	Cloudy/foggy
171	2021-05-01	9:51	10:16	Michael Schumacher	NA	AWAR KM 20	100-300	280	Both	Yes	5	-14	40	NA	NA	NA	NA
172	2021-05-01	10:28	10:46	Michael Schumacher	NA	AWAR KM 24	300-1000	320	West	No	10	-14	40	NA	NA	NA	NA
173	2021-05-02	8:05	8:33	KN	NA	AWAR KM 106	0-50	90	East	No	16	-6	39	NA	NA	4	Cloudy
174	2021-05-02	9:00	9:30	KN	NA	AWAR KM 106	0-50	90	East	No	7	-6	39	NA	NA	4	Cloudy
175	2021-05-02	9:35	9:35	KN	NA	AWAR KM 102	100-300	45	East	No	7	-6	39	NA	NA	4	Light Snow
176	2021-05-02	9:36	9:52	KN	NA	AWAR KM 102	50-100	75	West	No	7	-6	39	NA	NA	4	Light Snow
177	2021-05-02	11:01	11:33	Michael Schumacher	NA	AWAR KM 18	300-1000	290	West	No	63	-2	37	NA	NA	NA	NA
178	2021-05-02	14:11	14:28	KN	NA	AWAR KM 23	300-1000	0	West	No	22	-6	39	NA	NA	NA	NA
179	2021-05-02	14:32	15:07	KN	NA	AWAR KM 23	>1000	270	West	No	22	-6	39	NA	NA	40	NA
180	2021-05-02	14:40	14:01	KN	NA	AWAR KM 23	>1000	270	West	No	22	-6	39	NA	NA	4	Snow melting quickly
181	2021-05-03	9:51	10:15	Laurence Archambault	NA	AWAR KM 92	>1000	45	West	No	22	0	14	NA	NA	0	Light Snow
182	2021-05-03	10:51	11:21	Laurence Archambault	NA	AWAR KM 68	300-1000	5	West	No	8	1	12	NA	NA	0	Light Snow
183	2021-05-03	13:52	14:21	Laurence Archambault	NA	Amaruq KM 147	0-50	-90	West	No	5	1	11	NA	NA	0	Light Snow
184	2021-05-03	14:21	14:39	Laurence Archambault	NA	Amaruq KM 147	300-1000	-85	West	No	6	1	11	NA	NA	0	Light Snow

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
185	2021-05-04	8:57	9:09	LA, CM	NA	Amaruq KM 177	300-1000	15	West	No	55	0	6	NA	NA	0	Light Snow and Fog
186	2021-05-04	10:00	10:30	KN	NA	AWAR KM 22	300-1000	285	West	No	42	1	8	NA	NA	1	Very foggy in morning. Light snow in afternoon and snow yesterday.
187	2021-05-04	10:09	10:40	LA, CM	NA	Amaruq KM 161	300-1000	5	West	No	35	1	9	NA	NA	0	Light Snow and Fog
188	2021-05-04	10:35	11:05	KN	NA	AWAR KM 24	300-1000	280	West	No	10	1	8	NA	NA	1	Very foggy in morning. Light snow in afternoon and snow yesterday.
189	2021-05-05	10:53	11:20	KN	NA	AWAR KM 16	300-1000	90	West	No	25	0	13	NA	NA	1	Light Snow at the end of the Day
190	2021-05-05	13:26	14:10	OJ KAK	NA	Amaruq 178 KM	50-100	45	West	No	49	0	NA	NA	NA	NA	NA
191	2021-05-06	12:17	12:42	LA, CM	NA	Amaruq 178 KM	100-300	45	West	No	20	NA	NA	NA	NA	1	NA
192	2021-05-06	12:42	13:14	LA, CM	NA	Amaruq 178 KM	100-300	85	West	No	20	NA	NA	NA	NA	NA	NA
193	2021-05-06	13:52	14:31	OJ, KAK	NA	AWAR 34 KM	300-1000	340	West	No	41	-1	37	NA	NA	0	Overcast
194	2021-05-06	14:47	15:17	OJ, KAK	NA	AWAR 39 KM	300-1000	330	West	No	10	-1	37	NA	NA	0	Overcast but a bit foggy
195	2021-05-07	8:14	8:26	Louis Dubois	NA	AWAR 6 KM	300-1000	90	West	No	19	-5	20	NA	NA	NA	NA
196	2021-05-07	14:06	14:55	KAK, EF	NA	AWAR 44 KM	300-1000	270	West	No	66	-2	28	NA	NA	1	Partial Sun
197	2021-05-07	15:45	16:16	KAK, EF	NA	AWAR 59 KM	300-1000	270	West	No	22	-2	28	NA	NA	1	Overcast
198	2021-05-08	12:25	12:28	KAK, EF	NA	AWAR KM (N/A)	300-1000	NA	West	No	41	-3	17	NA	NA	2	Good visibility (no fog)
199	2021-05-08	12:58	13:30	KAK, EF	NA	AWAR 30 KM	100-300	90	West	No	17	-3	17	NA	NA	2	Overcast. Fog has lifted in this area
200	2021-05-08	14:11	14:34	KAK, EF	NA	AWAR 51 KM	300-1000	270	West	No	8	-1	21	NA	NA	2	Overcast. Fog has lifted
201	2021-05-08	14:20	14:50	KN	NA	Amaruq 115 KM	300-1000	280	West	No	33	-5	9	NA	NA	NA	Cloudy
202	2021-05-08	15:05	15:35	KN	NA	Amaruq 122 KM	100-300	270	West	No	36	-5	9	NA	NA	NA	Cloudy
203	2021-05-08	15:48	16:18	KN	NA	Amaruq 125 KM	100-300	270	West	No	2	-5	9	NA	NA	NA	Sky Clearing Up
204	2021-05-08	15:58	16:33	KAK, EF	NA	AWAR 81 KM	300-1000	270	West	No	2	-1	21	NA	NA	2	Sunny
205	2021-05-09	10:48	11:25	OJ, KAK	NA	AWAR 68 KM	100-300	320	East	No	2	-3	18	NA	NA	3	Sunny
206	2021-05-10	8:10	8:50	KAK	NA	AWAR 104 KM	100-300	90	West	No	1	-7	6	NA	NA	3	Overcast
207	2021-05-10	9:47	10:27	KAK	NA	AWAR 100 KM	100-300	280	East	No	2	-4	6	NA	NA	3	Overcast
208	2021-05-10	17:15	17:55	KAK	NA	AWAR 83 KM	100-300	280	West	No	1	1	24	NA	NA	3	Overcast
209	2021-05-11	10:05	10:44	KAK, EF	NA	AWAR KM (N/A)	300-1000	15	East	No	39	-4	50	NA	NA	0	Windy and Blowing Snow
210	2021-05-11	13:51	14:34	KAK, EF	NA	Amaruq 124 KM	300-1000	280	West	No	1	-4	70	NA	NA	0	Partial Sun and Cloud
211	2021-05-11	17:24	18:01	KAK, EF	NA	AWAR 100 KM	100-300	45	East	No	62	-5	70	NA	NA	0	Sunny and Windy
212	2021-05-12	8:30	9:05	OJ, KAK	NA	AWAR 100 KM	100-300	280	East	No	2	-13	47	NA	NA	0	Sunny
213	2021-05-12	14:40	15:01	OJ, KAK	NA	AWAR 48 KM	300-1000	280	West	No	1	-8	27	NA	NA	0	Sunny
214	2021-05-12	16:07	16:22	OJ, KAK	NA	AWAR 91 KM	300-1000	300	West	No	1	-13	47	NA	NA	0	Sunny
215	2021-05-13	11:50	12:20	RW, AA	NA	Amaruq 112 KM	0-50	NA	West	No	30	-10	50	NA	NA	0	Blowing Snow
216	2021-05-14	9:53	10:08	EF, OJ	NA	AWAR 45 KM	100-300	100	West	No	29	-18	24	NA	NA	0	Wheather observations: Sunny and windy. Wind 24-36km/h.
217	2021-05-15	9:02	9:53	AA, CM	NA	Amaruq 132 KM	100-300	NA	West	No	33	-17	19	NA	NA	3	NA
218	2021-05-15	15:02	15:38	OJ, EF	NA	AWAR 105 KM	>1000	260	East	No	28	-9	20	NA	NA	1	Cloudy, calm
219	2021-05-16	9:00	9:31	EF	NA	AWAR 104 KM	100-300	200	East	No	2	NA	NA	NA	NA	NA	NA
220	2021-05-16	9:54	10:29	EF, AB	NA	AWAR 102 KM	300-1000	50	West	No	2	NA	NA	NA	NA	NA	NA
221	2021-05-16	15:47	16:16	ST, CM	NA	Amaruq 160	50-100	NA	East	No	2	6	7	NA	NA	0	Cloudy
222	2021-05-17	14:53	16:28	EF	NA	AWAR 67 KM	0-50	NA	West	No	8	-20	22	NA	NA	NA	Clear day, no clouds, little wind
223	2021-05-17	15:11	15:47	EF	NA	AWAR 73 KM	>1000	140	West	No	37	-6	24	NA	NA	NA	Cloudy
224	2021-05-18	9:22	9:45	EF	NA	Amaruq 133 KM	100-300	80	East	No	2	-15	32	NA	NA	NA	Sunny

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
225	2021-05-18	14:26	14:59	EF	NA	Amaruq 131 KM	300-1000	NA	East	No	2	-9	30	NA	NA	NA	NA
226	2021-05-18	15:56	16:06	EF	NA	Amaruq 117 KM	100-300	NA	East	No	2	-9	30	NA	NA	Sunny, wind	NA
227	2021-05-20	12:18	12:50	FL, RW, AA	NA	Other	100-300	NA	West	No	19	-2	5	NA	NA	NA	NA
228	2021-05-24	12:21	12:52	AA	NA	Amaruq 176 KM	100-300	NA	West	No	5	-4	20	NA	NA	0	Snow, low visibility
229	2021-05-28	12:00	12:39	LA, AG	NA	Amaruq KM (N/A)	100-300	90	West	No	2	1	23	NA	NA	NA	Cloudy
230	2021-05-28	12:45	13:13	LA, AG	NA	Amaruq KM (N/A)	100-300	90	West	No	2	1	23	NA	NA	0	Cloudy
231	2021-06-04	12:00	12:30	LA, AG	NA	Amaruq KM (N/A)	50-100	90	West	No	21	3	10	NA	NA	NA	NA
232	2021-06-04	12:41	13:11	LA, AG	NA	Amaruq KM (N/A)	100-300	20	West	No	21	3	10	NA	NA	NA	NA
233	2021-06-05	12:12	12:43	ST	NA	Amaruq KM (N/A)	300-1000	NA	West	No	18	1	NA	NA	NA	NA	NA
234	2021-06-08	12:13	12:13	LA	NA	Amaruq KM (N/A)	50-100	80	West	No	12	1	21	NA	NA	NA	Cloudy
235	2021-06-08	12:32	13:05	LA	NA	Amaruq KM (N/A)	100-300	80	West	No	12	NA	NA	NA	NA	NA	NA
236	2021-06-09	12:18	12:43	ST, AA	NA	Amaruq KM (N/A)	100-300	NA	West	No	22	2	11	NA	NA	NA	NA
237	2021-06-18	14:58	15:00	Y	NA	Meadowbank 4 KM	300-1000	NA	West	No	23	1	NA	NA	NA	NA	NA
238	2021-08-05	12:12	12:31	ST, CM	NA	Amaruq KM (N/A)	100-300	NA	East	No	45	5	40	NA	NA	NA	NA
239	2021-08-19	12:00	12:30	LA, KM	NA	Amaruq KM (N/A)	0-50	15	West	Yes	3	13	7	NA	NA	NA	Sunny
240	2021-08-19	12:42	13:09	LA, KM	NA	Amaruq KM (N/A)	0-50	90	West	No	1	13	7	NA	NA	NA	Sunny
241	2021-08-20	12:13	12:59	Do	NA	Amaruq KM (N/A)	50-100	NA	West	No	1	12	10	NA	NA	NA	NA
242	2021-08-20	12:13	12:59	Do	NA	Amaruq KM (N/A)	50-100	NA	West	No	1	12	10	NA	NA	NA	NA
243	2021-08-22	12:02	12:35	LA, AG	NA	Amaruq KM (N/A)	100-300	90	East	No	2	9	40	NA	NA	0	Cloudy
244	2021-08-22	12:35	13:13	LA, AG	NA	Amaruq KM (N/A)	100-300	90	East	No	3	10	51	NA	NA	NA	Cloudy
245	2021-08-24	11:50	12:20	LA, AG, AASPB	NA	Amaruq KM (N/A)	100-300	85	West	No	2	15	21	NA	NA	NA	NA
246	2021-09-28	11:51	13:00	Laurence Archambault	NA	Amaruq KM 177	300-1000	100	West	No	138	6	18	NA	NA	7	No precipitation, lots of fog
247	2021-09-28	11:51	13:00	Laurence Archambault	NA	Amaruq KM 177	300-1000	100	West	No	138	6	18	NA	NA	7	No precipitation, lots of fog
248	2021-10-22	11:44	12:45	Laurence Archambault, Kathleen Newberry	NA	Amaruq KM (N/A)	>1000	25	West	No	7	-3	33	NA	NA	3	No precipitation
249	2021-11-05	8:16	8:25	Lia	NA	AWAR KM 75	0-50	2	East	No	200	2	2	NA	NA	2	No precipitation
250	2021-12-09	13:04	13:43	Nicolas S/Felix Q	NA	AWAR KM 44	100-300	270	West	No	101	-20	20	NA	NA	2	No precipitation, cloudy
251	2022-01-29	11:30:00	13:00:00	Laurence Archambault and Rowan Woodall	NA	Amaruq KM NA	100-300	30	East	No	10	-28	40	SW	68	0	Precipitation: None
252	2022-04-03	14:30:00	14:30:00	Rowan Woodall, Kathleen Newberry	NA	Amaruq KM NA	300-1000	200	West	NA	5	-15	20	NW	67	2	Precipitation: 0
253	2022-04-03	14:30:00	14:30:00	Rowan Woodall, Kathleen Newberry	NA	Amaruq KM NA	300-1000	200	West	NA	5	-15	20	NW	67	2	Precipitation: 0
254	2022-04-08	9:41:00	10:13:00	Rowan Woodall and Kathleen Newberry	NA	Haul Road KM 147	100-300	150	West	No	5	-8	8	NW	92	0	Precipitation: None
255	2022-04-08	14:35:00	15:09:00	Rowan Woodall, Kathleen Newberry	NA	Haul Road KM 179	100-300	10	West	No	15	-6	8	NW	92	0	Precipitation: 0 Foggy
256	2022-04-09	9:12:00	9:54:00	Derek	NA	AWAR KM 88	300-1000	290	West	No	27	5	5	S	10	1	Precipitation: Snowing Snowing
257	2022-04-09	11:48:00	12:18:00	Rowan Woodall and Kathleen Newberry	NA	Haul Road KM 118	300-1000	345	West	No	100	-8	23	SE	91	0	Precipitation: Light snow
258	2022-04-09	12:58:00	13:30:00	Derek Nateela	NA	AWAR KM 35	300-1000	240	West	No	7	3	3	S	2	1	Precipitation: White Snowing
259	2022-04-10	6:19:00	6:50:00	Kathleen Newberry	NA	Haul Road KM 144	100-300	190	West	No	60	-5	20	NE	84	0	Precipitation: 0
260	2022-04-10	7:57:00	8:37:00	Kathleen Newberry	NA	Haul Road KM 167	300-1000	30	West	No	NA	-13	21	NE	84	0	Precipitation: 0
261	2022-04-10	8:55:00	8:55:00	Kathleen Newberry	NA	Haul Road KM 170	300-1000	180	West	NA	NA	-5	20	NW	NA	0	Precipitation: Light snow Light snow
262	2022-04-10	9:02:00	9:45:00	Kathleen Newberry	NA	Haul Road KM 170	300-1000	180	West	No	NA	-13	20	NW	NA	0	Precipitation: Light snow Light snow
263	2022-04-10	16:50:00	18:15:00	Rowan Woodall	NA	Haul Road KM 177	300-1000	260	West	No	NA	-18	22	NE	84	0	Precipitation: Yes, light snow
264	2022-04-10	16:50:00	18:15:00	Rowan Woodall	NA	Haul Road KM 177	300-1000	260	West	No	NA	-18	22	NE	84	0	Precipitation: Yes, light snow
265	2022-04-10	16:50:00	18:15:00	Rowan Woodall	NA	Haul Road KM 177	300-1000	260	West	No	NA	-18	22	NE	84	0	Precipitation: Yes, light snow
266	2022-04-11	12:03:00	9:36:00	Derek	NA	Haul Road KM 170	300-1000	180	West	No	NA	-12	40	N	78	1	Precipitation: 0 Nada

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
267	2022-04-11	17:01:00	18:19:00	Eric Leonard / Kathleen Newberry	NA	Haul Road KM 179	300-1000	300	West	No	8	-15	46	N	78	0	Precipitation: None Gusting wind, blowing snow
268	2022-04-14	10:42:00	11:15:00	OlivierJean & Jean-Francois Dufour	NA	Haul Road KM 170	100-300	210	West	No	17	-16	20	NW	65	4	Precipitation: 0
269	2022-04-14	12:13:00	13:23:00	OlivierJean & Jean-Francois Dufour	NA	Haul Road KM 115	300-1000	270	West	No	117	-16	20	W	65	5	Precipitation: 0
270	2022-04-14	16:51:00	13:56:00	OlivierJean & Jean-Francois Dufour	NA	Haul Road KM 115	300-1000	270	West	No	117	-16	20	NW	65	5	Precipitation: 0
271	2022-04-15	9:29:00	10:16:00	Felix Quessy Savard Olivier Gagnon	NA	Haul Road KM 175	300-1000	0	West	No	35	-14	20	NW	0	2	Precipitation: O Sunny
272	2022-04-15	17:48:00	18:30:00	Eric Leonard	NA	Amaruq KM NA	100-300	350	East	No	5	-15	24	NW	79	5	Precipitation: 0 Sunny & clear
273	2022-04-16	10:07:00	10:41:00	Eric Leonard	NA	Haul Road KM 149	300-1000	10	East	No	5	-26	18	NW	72	5	Precipitation: 0 Sunny & clear
274	2022-04-16	17:44:00	18:28:00	Laurence Archambault	NA	Amaruq KM NA	50-100	15	West	No	14	-24	18	NW	72	0	Precipitation: None Sunny
275	2022-04-17	12:39:00	13:10:00	Sylvain singaqti Olivier Gagnon	NA	Haul Road KM 114	300-1000	90	East	No	12	-15	30	NW	0	5	Precipitation: Snow
276	2022-04-18	14:09:00	14:57:00	Sylvain Singaqti	NA	AWAR KM 95	100-300	0	West	No	134	-12	15	NW	14	1	Precipitation: Clear Sunny
277	2022-04-19	8:02:00	8:34:00	OJ OG	NA	Haul Road KM 154	100-300	40	West	No	2	-10	14	N	75	7	Precipitation: 0
278	2022-04-19	12:55:00	13:32:00	Sylvain, Felix Quessy	NA	AWAR KM 93	>1000	350	West	No	123	-14	4	SW	0	5	Precipitation: 0 Sunny
279	2022-04-19	16:23:00	17:00:00	Olivier Jean & Louis Dubois	NA	AWAR KM 93	>1000	0	West	No	NA	-19	14	NW	75	7	Precipitation: 0
280	2022-04-19	17:00:00	17:12:00	Olivier Jean & Louis Dubois	NA	AWAR KM 93	>1000	0	West	No	NA	-19	14	NW	75	7	Precipitation: 0
281	2022-04-19	17:01:00	17:38:00	Eric Leonard	NA	Amaruq KM NA	300-1000	300	East	No	14	-17	0	SW	75	0	Precipitation: O Overcast
282	2022-04-20	12:38:00	13:10:00	Eric Leonard	NA	Haul Road KM 150	300-1000	0	East	No	9	-18	12	SE	72	5	Precipitation: 0 Overcast
283	2022-04-20	15:13:00	15:45:00	Olivier Gagnon	NA	AWAR KM 93	300-1000	70	East	No	84	-10	23	NW	76	0	Precipitation: Snow
284	2022-04-20	15:45:00	16:18:00	Felix Quessy Olivier Jean	NA	Haul Road KM 112	300-1000	90	West	No	40	-21	20	NW	0	1	Precipitation: 0 Sunny
285	2022-04-21	8:44:00	9:48:00	Eric Leonard	NA	Haul Road KM 179	100-300	280	West	No	1414	-26	15	NW	71	10	Precipitation: 0 Overcast, foggy
286	2022-04-21	8:54:00	9:24:00	Olivier Gagnon Jean-François dufour	NA	Haul Road KM 130	100-300	70	East	Yes	2	-10	15	NW	75	1	Precipitation: Snow
287	2022-04-21	9:43:00	10:30:00	Olivier Gagnon Jean-François Dufour	NA	Haul Road KM 128	>1000	230	West	No	16	-15	20	NW	75	1	Precipitation: Snow
288	2022-04-21	10:29:00	10:59:00	Olivier Gagnon	NA	Haul Road KM 125	300-1000	230	West	No	22	-10	20	NW	75	1	Precipitation: Snow
289	2022-04-21	11:05:00	11:36:00	Laurence Archambault and Kevin Martee	NA	Haul Road KM 116	300-1000	350	West	No	18	-25	25	NW	71	0	Precipitation: 0 Sunny
290	2022-04-22	9:08:00	9:35:00	Laurence Archambault	NA	Haul Road KM 176	300-1000	280	West	No	64	-21	6	W	81	3	Precipitation: 0 Sunny
291	2022-04-22	9:08:00	9:35:00	Laurence Archambault	NA	Haul Road KM 176	300-1000	280	West	No	64	-21	6	W	81	3	Precipitation: 0 Sunny
292	2022-04-22	9:08:00	9:35:00	Laurence Archambault	NA	Haul Road KM 176	300-1000	280	West	No	64	-21	6	W	81	3	Precipitation: 0 Sunny
293	2022-04-22	11:07:00	11:48:00	SS - JFD	NA	Haul Road KM 111	0-50	140	Both	Yes	254	-19	30	NE	65	1	Precipitation: None Sunny
294	2022-04-22	12:24:00	12:58:00	Olivier Gagnon	NA	AWAR KM 50	100-300	140	East	No	12	-10	30	NW	75	2	Precipitation: 0
295	2022-04-22	12:54:00	13:28:00	Sylvain Singaqti - Jeff Dufour	NA	Haul Road KM 111	50-100	130	East	No	9	-18	20	NW	65	1	Precipitation: 0 Sunny
296	2022-04-22	13:13:00	13:42:00	Laurence Archambault	NA	Haul Road KM 163	100-300	270	West	No	36	17	6	W	81	3	Precipitation: 0 Sunny
297	2022-04-22	13:29:00	14:00:00	Sylvain Singaqti - Jeff Dufour	NA	Haul Road KM 111	50-100	140	East	No	10	-18	20	NW	65	1	Precipitation: 0 Sunny
298	2022-04-22	14:16:00	14:30:00	Laurence Archambault	NA	Haul Road KM 163	100-300	280	West	No	14	-24	6	W	87	3	Precipitation: 0
299	2022-04-24	17:57:00	18:39:00	Eric Leonard	NA	Amaruq KM NA	300-1000	0	West	No	7	-22	20	NW	60	9	Precipitation: O
300	2022-04-25	17:20:00	11:12:00	Derek	NA	Haul Road KM 152	0-50	50	East	Yes	9	-20	40	N	78	1	Precipitation: 0 Nada
301	2022-04-26	9:10:00	9:10:00	Rowan Woodall and Kevin Martee	NA	Haul Road KM 163	300-1000	330	West	NA	98	-10	7	NW	70	9	Precipitation: None
302	2022-04-26	14:30:00	15:18:00	Felix Quessy Sylvain	NA	Haul Road KM 111	300-1000	0	West	No	2	-10	15	NW	0	5	Precipitation: 0 Sunny
303	2022-04-27	6:17:00	6:50:00	Rowan Woodall	NA	Haul Road KM 151	0-50	120	Both	Yes	10	-10	15	NW	70	10	Precipitation: 0
304	2022-04-27	16:42:00	17:18:00	Alex Blanchette	NA	Haul Road KM 125	>1000	0	West	No	36	-3	15	NE	75	7	Precipitation: None
305	2022-04-29	10:41:00	11:18:00	Derek, Nicolas	NA	AWAR KM 6	100-300	270	West	No	2	-10	30	N	0	1	Precipitation: Nada Nada
306	2022-04-30	17:25:00	18:30:00	Rowan Woodall	NA	Amaruq KM 143	100-300	0	West	No	22	-14	30	N	70	2	Precipitation: None
307	2022-05-03	17:45:00	18:30:00	Rowan Woodall, Kathleen Newberry	NA	Haul Road KM 179	50-100	150	West	No	33	-6	10	SE	84	5	Precipitation: 0
308	2022-05-04	15:52:00	16:34:00	Alex	NA	Meadowbank KM NA	0-50	340	East	Yes	21	-5	15	NW	85	4	Precipitation: None Few

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
309	2022-05-05	17:35:00	18:26:00	Eric Leonard	NA	Amaruq KM NA	100-300	350	West	No	20	-10	40	SE	78	0	Precipitation: 0 Windy, poor visibility
310	2022-05-07	17:35:00	18:15:00	Kathleen Newberry	NA	Amaruq KM NA	100-300	150	East	No	10	0	30	NW	92	0	Precipitation: In the morning
311	2022-05-12	13:53:00	14:29:00	Louis Dubois - Jeff Dufour	NA	AWAR KM 104	50-100	180	West	No	12	-2	20	NW	65	1	Precipitation: None Cloudy
312	2022-05-15	8:23:00	8:58:00	NB JL	NA	Haul Road KM 110	100-300	180	West	No	18	3	15	NW	75	5	Precipitation: 0 Sunny
313	2022-05-19	15:23:00	20:56:00	Jeff Dufour	NA	AWAR KM 102	100-300	270	West	No	2	-1	40	N	60	4	Precipitation: 0
314	2022-06-14	17:37:00	18:23:00	Eric Leonard	NA	Amaruq KM NA	300-1000	0	West	No	19	22	26	W	37	13	Precipitation: 0 Sun and cloud
315	2022-07-31	14:33:00	15:10:00	JL NB	NA	AWAR KM 89	>1000	300	East	No	10	8	40	NW	67	0	Precipitation: 0 Windy and cloudy
316	2022-07-31	15:17:00	15:56:00	Nadine Blatter Nadine Lachance	NA	AWAR KM 83	100-300	180	East	No	39	10	35	NW	67	0	Precipitation: 0 Cloudy and windy
317	2022-07-31	16:08:00	16:34:00	Alex Blanchette	NA	AWAR KM 52	300-1000	90	East	No	25	10	20	E	100	0	Precipitation: Light rain
318	2022-08-01	13:44:00	13:44:00	Derek	NA	AWAR KM 20	100-300	250	West	NA	4	7	30	NW	50	1	Precipitation: Rain
319	2022-08-01	14:02:00	14:32:00	Derek	NA	AWAR KM 22	50-100	150	East	No	37	7	30	NW	20	1	Precipitation: Rain Rain windy
320	2022-08-01	14:48:00	15:24:00	Jeff Dufour	NA	AWAR KM 94	100-300	250	West	No	2	6	50	NW	60	1	Precipitation: Light rain
321	2022-08-01	15:27:00	15:56:00	Jeff Dufour	NA	AWAR KM 93	50-100	100	East	No	1	6	50	NW	60	1	Precipitation: Light rain
322	2022-08-02	11:02:00	11:36:00	NB DN	NA	Haul Road KM 139	300-1000	300	East	No	5	10	35	N	63	0	Precipitation: 10% Cloudy and rainy
323	2022-08-02	17:21:00	17:39:00	Jeff Dufour	NA	AWAR KM 20	100-300	90	East	No	7	9	26	N	60	1	Precipitation: Light rain
324	2022-08-03	11:24:00	11:54:00	Jeff Dufour	NA	AWAR KM 12	50-100	85	East	No	2	12	17	N	60	1	Precipitation: Periods of light rain
325	2022-08-04	10:30:00	10:48:00	JL NB	NA	Haul Road KM 159	100-300	270	East	No	3	10	26	NW	70	0	Precipitation: Small rain during the survey Rainy
326	2022-08-04	11:03:00	11:16:00	JL NB	NA	Haul Road KM 150	>1000	310	East	No	8	10	26	NW	70	0	Precipitation: Rainy On and off rain
327	2022-08-04	11:23:00	11:31:00	Jeff Dufour	NA	AWAR KM 79	100-300	90	East	No	5	9	26	NW	60	1	Precipitation: Light rain intermitant
328	2022-08-04	11:33:00	12:04:00	JL	NA	Haul Road KM 140	100-300	310	East	No	1	10	26	NW	70	0	Precipitation: Rainy
329	2022-08-04	13:01:00	13:16:00	Jeff Dufour	NA	AWAR KM 32	100-300	100	East	No	5	13	26	NW	60	0	Precipitation: None
330	2022-08-09	11:34:00	12:18:00	Jaden Vieveen Sylvain Singaqti	NA	Haul Road KM 171	100-300	0	East	No	1	22	8	S	44	7	Precipitation: Sunny Sunny
331	2022-08-26	16:57:00	18:18:00	Eric Leonard	NA	Amaruq KM NA	300-1000	0	East	No	3	10	4	NE	82	4	Precipitation: 0 Clear skies
332	2022-09-23	17:03:00	17:03:00	Kathleen Newberry	NA	Amaruq KM NA	>1000	220	West	NA	4	3	40	SE	80	0	Precipitation: None
333	2022-09-24	13:33:00	14:10:00	Louis D. Kristel B.	NA	Haul Road KM 174	100-300	50	West	No	5	6	17	NE	80	1	Precipitation: None
334	2022-09-26	16:41:00	18:20:00	Eric Thomson	NA	Amaruq KM NA	50-100	70	East	No	6	1	17	NW	63	0	Precipitation: 0 Overcast
335	2022-10-04	11:23:00	11:44:00	Laurence Archambault and Kevin Martee	NA	Haul Road KM 130	50-100	100	West	No	2	-1	45	NW	77	0	Precipitation: 0 Cloudy
336	2022-10-04	11:50:00	12:22:00	Laurence Archambault and Kevin Martee	NA	Haul Road KM 127	300-1000	100	West	No	1	-1	45	NW	77	0	Precipitation: 0 Cloudy
337	2022-10-04	13:17:00	13:53:00	Sylvain Singaqti, Felix Quessy Savard	NA	AWAR KM 70	0-50	0	East	No	26	-1	40	NW	70	1	Precipitation: Windy Cloudy, windy
338	2022-10-07	15:11:00	15:40:00	Alex B. Keven M.	NA	Haul Road KM 170	100-300	60	East	Yes	70	-3	50	W	0	1	Precipitation: None Overcaste
339	2022-10-08	16:23:00	16:42:00	Alex B and Kevin M	NA	Haul Road KM 166	100-300	90	East	No	1	10	20	NW	100	1	Precipitation: Light rain Fog
340	2022-10-15	6:24:00	16:20:00	Alex Blanchette	NA	Haul Road KM 149	0-50	270	East	No	300	-3	30	N	75	1	Precipitation: 0
341	2022-10-21	16:36:00	17:15:00	Derek Nateela	NA	AWAR KM 41	300-1000	40	East	No	199	-3	20	NW	10	1	Precipitation: Cloudy
342	2022-10-30	11:04:00	11:37:00	Felix Quessy Savard	NA	AWAR KM 59	100-300	90	East	No	NA	-16	5	NW	0	1	Precipitation: 0 Cloudy
343	2022-11-02	11:31:00	14:57:00	Alex B	NA	AWAR KM 87	300-1000	270	East	No	NA	-20	20	E	0	3	Precipitation: None Overcast
344	2022-11-02	14:36:00	15:12:00	Sylvain Singaqti	NA	AWAR KM 81	0-50	0	East	Yes	338	-18	20	NW	60	1	Precipitation: Clear Sunny with a bit of clouds
345	2022-11-10	14:38:00	15:03:00	Alex Blanchette	NA	AWAR KM 51	300-1000	270	East	No	65	-25	20	NE	100	5	Precipitation: None
346	2022-11-12	9:25:00	9:48:00	Rowan Woodall and Kathleen Newberry	NA	Haul Road KM 176	300-1000	60	East	No	35	-16	30	SW	77	0	Precipitation: None
347	2022-11-13	12:41:00	13:22:00	Alex and Guillaume	NA	AWAR KM 32	>1000	0	Both	No	2000	-9	30	NW	0	1	Precipitation: None
348	2022-11-17	10:20:00	10:53:00	Kathleen Newberry	NA	Haul Road KM 158	50-100	250	West	No	2	-17	20	NW	77	1	Precipitation: 0
349	2022-11-17	11:10:00	11:40:00	Kathleen Newberry	NA	Haul Road KM 147	300-1000	140	East	No	2	-16	20	NW	77	1	Precipitation: 0
350	2022-11-17	14:07:00	14:44:00	Eric Thomson	NA	AWAR KM 48	100-300	0	East	No	100	-16	20	NE	70	0	Precipitation: 0 N/A
351	2022-11-18	13:32:00	14:03:00	Eric Thomson	NA	AWAR KM 49	300-1000	0	East	No	100	-22	36	NW	60	0	Precipitation: 0
352	2022-11-20	10:25:00	10:51:00	Derek	NA	AWAR KM 66	300-1000	45	East	No	96	-26	16	NE	1	1	Precipitation: Shitty Shitty

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
353	2022-11-23	9:26:00	9:43:00	Eric Leonard, Kathleen Newberry	NA	Haul Road KM 139	300-1000	60	East	No	28	-18	20	E	95	2	Precipitation: 0
354	2022-11-26	9:20:00	9:53:00	Laurence Archambault and Kevin Martee	NA	Haul Road KM 177	100-300	270	West	No	1	-15	18	NW	79	0	Precipitation: None Cloudy
355	2023-03-30	NA	NA	Felix Quessy Savard	NA	AWAR KM 87	100-300	270	West	No	100	-27	20	E	0	1	Precipitation: 0 Sunny
356	2023-03-31	NA	NA	Kendra MacMillan	NA	AWAR KM 57	>1000	150	West	No	56	-17	30	NE	0	3	Precipitation: 0
357	2023-04-01	NA	NA	Felix Quessy	NA	Haul Road KM 121	300-1000	270	West	No	30	-21	10	NE	0	1	Precipitation: 0 Sunny
358	2023-04-01	NA	NA	Felix Quessy	NA	Haul Road KM 129	>1000	270	West	No	10	-21	10	E	0	1	Precipitation: O Sunny
359	2023-04-01	NA	NA	Felix Quessy	NA	Haul Road KM 137	>1000	180	West	Yes	NA	-19	10	E	0	1	Precipitation: O Sunny
360	2023-04-03	NA	NA	Derek Nateela	NA	Haul Road KM 112	300-1000	20	West	No	390	-16	20	NW	50	2	Precipitation: Sunny Clear
361	2023-04-04	NA	NA	FQS DN	NA	AWAR KM 92	100-300	215	West	Yes	40	-25	10	NW	0	1	Precipitation: 0 Sunny
362	2023-04-05	NA	NA	Derek	NA	AWAR KM 87	100-300	305	West	No	56	-16	10	N	20	1	Precipitation: Nada Cloudy
363	2023-03-30	NA	NA	Guillaume Baril & Rowan Woodall	NA	Haul Road KM 169	300-1000	330	East	Yes	2	-22	20	NW	45	1	Precipitation: None
364	2023-04-08	NA	NA	Sylvain Singaqti	NA	AWAR KM 95.5	300-1000	90	West	NA	50	-7	30	SW	0	0	Precipitation: Blowing snow Blowing snow
365	2023-04-07	NA	NA	Eric Thomson	NA	AWAR KM 93	300-1000	340	West	No	NA	-18	10	SW	0	0	Precipitation: 0 Sunny
366	2023-04-14	NA	NA	Louis Dubois	NA	AWAR KM 93	300-1000	0	West	No	93	-21	5	NW	80	9	Precipitation: O Sunny
367	2023-04-12	NA	NA	Louis Dubois	NA	Haul Road KM 130	300-1000	300	East	No	34	-20	5	W	80	7	Precipitation: O Sunny
368	2023-04-10	NA	NA	Eric Thomson	NA	Haul Road KM 111	100-300	300	West	No	NA	-11	20	N	0	0	Precipitation: 0 Cloudy
369	2023-04-15	NA	NA	Thomas Dahl	NA	Haul Road KM 174	>1000	360	West	No	18	-17	15	N	0	0	Precipitation: 0 Sunny
370	2023-04-15	NA	NA	Thomas Dahl	NA	Haul Road KM 174	>1000	360	West	No	18	-17	15	N	0	0	Precipitation: 0 Sunny
371	2023-04-14	NA	NA	Eric Thomson	NA	Haul Road KM 118	300-1000	300	West	No	47	-16	10	N	0	0	Precipitation: 0 Sunny
372	2023-04-14	NA	NA	Eric Thomson	NA	Haul Road KM 112	300-1000	300	East	No	47	-14	10	N	0	0	Precipitation: 0 0
373	2023-04-14	NA	NA	Eric Thomson	NA	Haul Road KM 112	>1000	360	West	No	247	-14	10	N	0	0	Precipitation: 0 Sunny
374	2023-04-15	NA	NA	Eric Thomson	NA	AWAR KM 101	300-1000	300	West	No	4	-13	10	N	0	0	Precipitation: 0 Sunny
375	2023-04-12	NA	NA	Sylvain Singaqti	NA	AWAR KM 51	50-100	0	West	No	433	-13	9	NE	0	4	Precipitation: 0 Sunny
376	2023-04-09	NA	NA	Eric Thomson	NA	Haul Road KM 122	>1000	330	West	No	NA	-7	10	NW	0	0	Precipitation: 0 Cloudy
377	2023-04-10	NA	NA	Guillaume Baril, Kathleen Newberry	NA	Haul Road KM 178	100-300	252	East	Yes	3	-8	20	N	77	0	Precipitation: 0
378	2023-04-10	NA	NA	Guillaume Baril, Kathleen Newberry	NA	Haul Road KM 175	>1000	110	West	No	55	-9	20	N	77	0	Precipitation: 0
379	2023-04-11	NA	NA	Guillaume Baril, Kathleen Newberry	NA	Haul Road KM 176	100-300	55	West	No	47	-7	11	NW	70	0	Precipitation: None
380	2023-04-11	NA	NA	Guillaume Baril, Kathleen Newberry	NA	Haul Road KM 178	300-1000	120	West	No	48	-13	13	NW	68	1	Precipitation: None
381	2023-04-14	NA	NA	Kathleen Newberry	NA	Haul Road KM 176	300-1000	150	West	No	16	-20	20	N	67	0	Precipitation: 0
382	2023-04-14	NA	NA	Laurence Archambault & Kathleen Newberry	NA	Haul Road KM 174	300-1000	270	West	No	16	-17	18	NW	71	0	Precipitation: 0 Sunny
383	2023-04-14	NA	NA	Laurence Archambault & Kathleen Newberry	NA	Haul Road KM 165	>1000	180	West	No	NA	-11	18	NW	71	0	Precipitation: 0 Sunny
384	2023-04-15	NA	NA	Thomas Dahm	NA	Haul Road KM 171	>1000	360	West	No	8	-14	15	S	0	0	Precipitation: 0 Sunny and clear
385	2023-04-16	NA	NA	Eric Thomson	NA	AWAR KM 96	100-300	360	West	No	2	-7	5	W	0	0	Precipitation: 0 Cloudy
386	2023-04-16	NA	NA	Eric Thomson	NA	AWAR KM 81	>1000	360	West	No	1	-12	12	S	0	0	Precipitation: 0 Cloudy
387	2023-04-18	NA	NA	Thomas Dahm Kendra Macmillan Leonard sweeting	NA	Haul Road KM 177	300-1000	360	West	No	102	-12	9	SE	0	0	Precipitation: 0 Sun with cloud
388	2023-04-17	NA	NA	Kendra MacMillan Sylvain Singaqti	NA	Haul Road KM 154	300-1000	45	West	NA	31	-8	15	SE	89	8	Precipitation: 0 Cloudy
389	2023-04-19	NA	NA	Kendra MacMillan Sylvain Singaqti	NA	AWAR KM 95	100-300	45	West	No	7	-18	30	NW	20	9	Precipitation: Light snow Snowing
390	2023-04-19	NA	NA	Kendra MacMillan Sylvain Singaqti	NA	AWAR KM 93	>1000	30	West	No	3	-18	30	NW	30	9	Precipitation: Light snow Light snow
391	2023-04-30	NA	NA	Derek Nateela	NA	AWAR KM 68	>1000	245	West	No	2	-14	5	S	50	1	Precipitation: Foggy Cloudy

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
392	2023-05-23	NA	NA	Thomas Dahm	NA	AWAR KM 83	>1000	270	West	No	2	-8	40	NW	0	0	Precipitation: 0 Cold , windy , some light snow that didn't stay on ground
393	2023-06-21	NA	NA	Felix Quessy	NA	Meadowbank KM NA	50-100	0	East	No	4	15	10	E	0	3	Precipitation: 0 Sunny
394	2023-10-24	NA	NA	Eric Leonard	NA	Haul Road KM 172	100-300	90	East	No	11	-5	5	E	98	0	Precipitation: Snowing Light snow
395	2023-10-22	NA	NA	GUI Baril Eric Leonard	NA	Haul Road KM 116	100-300	10	East	No	8	-5	50	W	90	0	Precipitation: 0 Windy, blowing snow , visibility 2km
396	2023-10-24	NA	NA	Eric Leonard Guillaume Baril	NA	Haul Road KM 133	100-300	0	East	No	2	-5	25	E	98	0	Precipitation: None Sun/cloud
397	2023-10-27	NA	NA	Laurence Archambault	NA	Haul Road KM 173	100-300	90	East	No	87	-12	12	NW	93	0	Precipitation: None Sun and cloud
398	2023-10-27	NA	NA	Laurence Archambault	NA	Haul Road KM 171	100-300	55	East	No	NA	-8	12	NW	93	0	Precipitation: Light snow Cloudy
399	2023-10-27	NA	NA	Laurence Archambault	NA	Haul Road KM 171	100-300	55	East	No	NA	-8	12	NW	93	0	Precipitation: Light snow Cloudy
400	2023-10-28	NA	NA	Brandon Ipkarnerk	NA	AWAR KM 9	50-100	45	West	No	25	-7	15	NW	93	0	Precipitation: 0
401	2023-10-28	NA	NA	Brandon Ipkarnerk	NA	AWAR KM 9	300-1000	280	West	No	20	7	15	NW	93	0	Precipitation: O
402	2023-10-31	NA	NA	Brandon Ipkarnerk	NA	AWAR KM 50	100-300	225	East	NA	100	11	40	NW	0	1	Precipitation: 0
403	2023-11-02	NA	NA	Brandon Ipkarnerk Brendan mannik	NA	AWAR KM 50	100-300	70	East	No	6	11	50	NW	0	1	Precipitation: 50
404	2023-11-02	NA	NA	Brandon Ipkarnerk Brendan mannik	NA	AWAR KM 47	0-50	45	East	No	4	11	50	NW	0	1	Precipitation: 50
405	2023-10-29	NA	NA	Eric Leonard	NA	Haul Road KM 154	300-1000	335	East	No	8	-13	2	NE	92	0	Precipitation: Light snow Light snow, overcast
406	2023-11-07	NA	NA	Kelly Habib Brenden Mannik	NA	AWAR KM 60	100-300	60	West	No	276	-8	15	NW	30	1	Precipitation: 0
407	2023-11-06	NA	NA	TD	NA	AWAR KM 77	100-300	90	East	No	2	-17	20	NW	90	5	Precipitation: 0 No wind sunny
408	2023-11-09	NA	NA	Kelly Habib and Brendan Mannik	NA	AWAR KM 40	300-1000	90	East	NA	100	-15	20	NW	30	0	Precipitation: 0 Overcast
409	2023-11-12	NA	NA	Derek	NA	AWAR KM 64	300-1000	285	West	No	100	-4	15	N	10	1	Precipitation: White out White out
410	2023-11-08	NA	NA	Brandon Ipkarnerk	NA	AWAR KM 63	50-100	330	West	No	200	15	20	NW	75	1	Precipitation: 0
411	2023-11-11	NA	NA	Renee Pudnak	NA	AWAR KM 8	300-1000	15	East	No	3	-12	20	NE	1	1	Precipitation: 1 Cold
412	2023-11-11	NA	NA	Renee Pudnak	NA	AWAR KM 17	>1000	30	West	NA	600	-12	20	NE	1	1	Precipitation: 1 Cold
413	2023-11-11	NA	NA	Renee Pudnak	NA	AWAR KM 60	300-1000	35	West	NA	27	-12	20	NE	1	1	Precipitation: 1 Cold
414	2023-11-01	NA	NA	Kate Walker, Laurence Archambault, Felix Quessy S.	NA	Haul Road KM 117	100-300	80	East	No	1	-11	50	NW	83	1	Precipitation: 0 Foggy
415	2023-11-17	NA	NA	Derek	NA	AWAR KM 93	>1000	215	East	No	100	-14	30	N	40	1	Precipitation: Snowing White out snowing
416	2023-11-18	NA	NA	Derek	NA	AWAR KM 55	>1000	10	East	No	150	-20	30	NW	40	1	Precipitation: Clear ..
417	2023-12-06	NA	NA	Brendan Mannik	NA	AWAR KM 49	100-300	45	West	No	5	-12	20	E	50	1	Precipitation: Snow Snowy
418	2023-12-06	NA	NA	Brendan Mannik	NA	AWAR KM 19	>1000	90	West	No	2	-13	15	E	50	1	Precipitation: Snow Snowy
419	2023-12-01	NA	NA	Brendan Mannik	NA	AWAR KM 57	0-50	355	East	Yes	37	-18	0	N	0	1	Precipitation: 50 Foggy
420	2023-12-08	NA	NA	Kelly Habib and Brendon Mannik	NA	AWAR KM 17	>1000	270	West	No	13	-20	15	NW	50	1	Precipitation: 0 Overcast
421	2023-12-12	NA	NA	Kelly Habib and Branden Mannik	NA	AWAR KM 56	300-1000	90	East	No	12	-27	15	NW	75	0	Precipitation: 0 Sunny
422	2023-12-16	NA	NA	Renee	NA	AWAR KM 73	300-1000	280	East	No	1	-28	50	NW	0	2	Precipitation: 0 â€¦.
423	2023-12-17	NA	NA	Renee Pudnak	NA	AWAR KM 67	>1000	20	East	No	43	-24	30	W	0	3	Precipitation: 0 0
424	2023-12-18	NA	NA	Renee pudnak	NA	AWAR KM 65	300-1000	0	East	No	187	-24	15	W	1	4	Precipitation: 1 1
425	2024-01-01	NA	NA	Kelly Habib	NA	AWAR KM 53	300-1000	270	West	No	70	-28	40	NW	50	4	Precipitation: 0 Sunny
426	2024-01-02	NA	NA	TD	NA	AWAR KM 68	300-1000	90	East	No	44	-20	50	NW	90	3	Precipitation: 0 Windy
427	2024-01-04	NA	NA	Kelly Habib	NA	AWAR KM 61	300-1000	270	West	No	25	-34	30	NW	70	1	Precipitation: 0 Sunny
428	2024-01-06	NA	NA	Derek	NA	AWAR KM 67	300-1000	220	East	No	89	-27	50	NW	5	1	Precipitation: Nada Clear
429	2024-01-11	NA	NA	Renee Pudnak	NA	AWAR KM 17	>1000	0	West	NA	43	-28	20	N	0	0	Precipitation: 0 0
430	2024-02-10	NA	NA	Derek	NA	AWAR KM 57	100-300	295	Both	No	27	-26	15	E	50	3	Precipitation: Cloudy Cloudy
431	2024-02-21	NA	NA	Ella Stables Thomas Dahm	NA	AWAR KM 97	100-300	280	West	No	4	-35	20	NW	95	2	Precipitation: 0 Sunny
432	2024-03-09	NA	NA	Derek	NA	AWAR KM 55	100-300	290	West	No	12	-19	10	N	78	1	Precipitation: Foggy Foggy
433	2024-04-06	NA	NA	Eric Leonard, JF DubÃ©	NA	Haul Road KM 139	50-100	180	West	No	22	-12	10	SE	95	2	Precipitation: None Overcast

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
434	2024-04-06	NA	NA	Eric Leonard, JF DubÃ©	NA	Haul Road KM 147	300-1000	225	West	No	9	-12	10	SE	95	2	Precipitation: None Overcast
435	2024-04-08	NA	NA	Eric Leonard, Jf DubÃ©	NA	Haul Road KM 115	300-1000	270	West	No	45	-7	30	S	86	4	Precipitation: None Overcast
436	2024-04-11	NA	NA	Laurence Archambault and Jean-FranÃ§ois DubÃ©	NA	Haul Road KM 139	300-1000	33	West	No	56	-19	27	NW	83	0	Precipitation: None Very foggy
437	2024-04-15	NA	NA	Ella Stables	NA	AWAR KM 102	100-300	180	East	No	12	-8	20	SE	90	0	Precipitation: Light snow Windy and overcast, light snow
438	2024-04-16	NA	NA	Ella Stables	NA	AWAR KM 78	300-1000	250	West	No	11	-10	30	SE	90	0	Precipitation: Snowing in the mornjng and early afternoon, just stopped approximately 1h ago Strong winds, likely more than 30km/h, probably closer to 40-50km/h at least. A lot of blowing snow. Visibility is only at maximum 1000m
439	2024-04-18	NA	NA	Ella Stables	NA	AWAR KM 97	100-300	300	East	No	3	-21	15	SE	0	1	Precipitation: No precipitation Sunny and clear
440	2024-04-18	NA	NA	Ella Stables	NA	AWAR KM 93	>1000	180	West	No	97	-21	15	SE	0	1	Precipitation: No precipitation Sunny and clear
441	2024-04-19	NA	NA	Laurence Archambault and Guillaume Baril	NA	Amaruq KM NA	>1000	260	West	NA	10	-9	9	N	81	0	Precipitation: Snow Blowing snow due to high wind started around 17:30 making the visibility worse
442	2024-04-23	NA	NA	Ella Stables	NA	AWAR KM 56	100-300	0	East	No	2	-19	20	SW	0	0	Precipitation: No precipitation Light snow last night
443	2024-04-22	NA	NA	Ella Stables	NA	AWAR KM 54	100-300	90	West	No	2	-19	15	N	0	2	Precipitation: No precipitation Sunny and clear
444	2024-04-22	NA	NA	Jeffrey Pratt	NA	AWAR KM 97	100-300	190	East	No	7	-19	15	N	85	3	Precipitation: No
445	2024-04-25	NA	NA	Ella Stables	NA	AWAR KM 36	100-300	270	West	No	2	-15	20	NW	0	0	Precipitation: Overcast and snow over night last night Overcast
446	2024-04-24	NA	NA	JP	NA	AWAR KM 37	100-300	90	East	No	2	-12	15	N	1	1	Precipitation: No Overcast
447	2024-04-22	NA	NA	Thomas Dahm	NA	Haul Road KM 123	300-1000	180	West	No	144	-17	15	NW	73	2	Precipitation: 0 Sunny, clear
448	2024-04-22	NA	NA	Thomas Dahm	NA	Haul Road KM 121	300-1000	200	West	No	46	-17	15	NW	73	2	Precipitation: 0 Sunny, clear
449	2024-04-23	NA	NA	Jeff Pratt, Thomas Dahm	NA	AWAR KM 93	300-1000	270	West	No	80	-17	20	SW	65	4	Precipitation: 0
450	2024-04-25	NA	NA	Ella Stables	NA	Haul Road KM 123	50-100	300	West	Yes	2	-10	20	W	90	0	Precipitation: 0 Cloudy
451	2024-04-19	NA	NA	Ella Stables	NA	AWAR KM 86	300-1000	180	West	No	55	-19	15	SW	88	0	Precipitation: 0 Clear
452	2024-04-19	NA	NA	Ella stable	NA	AWAR KM 86	300-1000	260	West	No	26	-19	15	SW	87	0	Precipitation: 0 Clear
453	2024-04-19	NA	NA	Ella stables	NA	AWAR KM 86	300-1000	300	West	No	6	-14	15	SW	88	0	Precipitation: 0 Clear
454	2024-05-05	NA	NA	Derek	NA	AWAR KM 100	300-1000	200	West	No	42	4	30	E	60	1	Precipitation: Sunny Sunny
455	2024-04-23	NA	NA	Laurence Archambault	NA	Haul Road KM 177	>1000	200	West	No	NA	-18	16	NW	81	0	Precipitation: None Sunny & Cloudy
456	2024-04-23	NA	NA	Laurence Archambault	NA	Haul Road KM 175	>1000	200	West	No	53	-13	16	NW	81	0	Precipitation: None Cloudy
457	2024-05-09	NA	NA	Thomas Dahm	NA	AWAR KM 65	300-1000	230	West	No	2	0	5	NW	87	7	Precipitation: 0 Overcast
458	2024-05-12	NA	NA	Ella Stables	NA	AWAR KM 100	>1000	180	West	No	32	-4	20	W	0	1	Precipitation: No precipitation Wind was 50km/h yesterday. Today clear skies and sunny
459	2024-05-09	NA	NA	Thomas, Derek	NA	AWAR KM 74	300-1000	200	West	No	2	0	15	N	50	1	Precipitation: Cloudy Cloudy
460	2024-05-08	NA	NA	Derek	NA	AWAR KM 82	300-1000	0	West	No	34	0	6	N	60	2	Precipitation: Cloudy Cloudy
461	2024-05-09	NA	NA	LJ & JC	NA	AWAR KM 107	100-300	66	East	No	17	0	6	N	20	4	Precipitation: 0 Overcast with a drizzle
462	2024-06-25	NA	NA	Jeff Pratt	NA	Amaruq KM NA	100-300	350	West	No	3	10	11	NW	0	1	Precipitation: 0
463	2024-07-05	NA	NA	Laurence Archambault and Nicholas Andreotte	NA	Amaruq KM NA	0-50	300	West	No	3	10	20	NE	96	0	Precipitation: None Overcast
464	2024-07-08	NA	NA	Laurence Archambault and Nicholas Andreotte	NA	Amaruq KM NA	50-100	180	West	No	2	13	25	NW	74	0	Precipitation: Light rain in AM
465	2024-05-09	NA	NA	LA EL	NA	Haul Road KM 177	100-300	260	West	NA	40	1	31	W	80	0	Precipitation: 0
466	2024-07-26	NA	NA	GB, NA, JZ	NA	Amaruq KM NA	0-50	20	East	No	1	19	20	NE	37	0	Precipitation: 0 Sunny
467	2024-08-11	NA	NA	Laurence Archambault and Jeffrey Pratt	NA	Amaruq KM NA	50-100	25	East	NA	1	23	30	W	74	0	Precipitation: None Smoky
468	2024-09-30	NA	NA	Laurence Archambault and Nicholas Andreotte	NA	Amaruq KM NA	100-300	255	West	No	1	9	17	SE	100	0	Precipitation: None
469	2024-10-05	NA	NA	Thomas Dahm	NA	AWAR KM 19	>1000	90	East	No	38	0	30	NW	75	1	Precipitation: 0 Clear and windy
470	2024-10-15	NA	NA	Renee pudnak	NA	AWAR KM 33	300-1000	5	East	NA	12	6	50	SW	10	2	Precipitation: , Rain

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Time Start	Time End	Observers	Waypoint	Road Name and Distance Marker	Distance from Caribou to Observer Location Binned	Bearing to Caribou Group	Is Group East or West of Survey	Did the Group Cross the Road during the Survey	Caribou Group Size	Temperature	Wind Speed (km/h)	Wind Direction	Humidity	Days Since Last Snow or Wind Event	Weather Observations
471	2024-10-17	NA	NA	Jessica Crook	NA	AWAR KM 76	300-1000	165	Both	No	148	0	40	SW	100	4	Precipitation: 0 Weather was sunny with some wind and high of 2Â°C
472	2024-10-20	NA	NA	Renee Pudnak	NA	AWAR KM 59	100-300	10	East	No	41	-3	70	W	0	1	Precipitation: . Windy
473	2024-10-22	NA	NA	Jessica crook	NA	AWAR KM 59	0-50	25	West	NA	3	-9	5	NW	90	2	Precipitation: P Sunny partly cloudy
474	2024-10-27	NA	NA	Thomas Dahm	NA	AWAR KM 14	>1000	90	East	No	94	-8	8	W	67	0	Precipitation: 0 Overcast
475	2024-10-27	NA	NA	Thomas Dahm	NA	AWAR KM 13	>1000	135	West	Yes	100	-8	20	W	0	0	Precipitation: 0 Overcast
476	2024-10-28	NA	NA	Eric Leonard	NA	AWAR KM 80	300-1000	285	West	No	16	-2	20	S	89	0	Precipitation: 0 Windy, overcast
477	2024-10-31	NA	NA	Thomas Dahm	NA	AWAR KM 33	300-1000	45	East	No	13	-6	40	NW	0	0	Precipitation: 0 Windy
478	2024-11-01	NA	NA	Thomas Dahm	NA	AWAR KM 9	>1000	65	East	No	7	-6	40	NW	0	0	Precipitation: 0 Overcast and windy
479	2024-11-01	NA	NA	Thomas Dahm	NA	AWAR KM 13	300-1000	75	East	No	2	-6	40	NW	0	0	Precipitation: 0 Overcast and windy
480	2024-11-04	NA	NA	FQS	NA	AWAR KM 32	300-1000	0	Both	Yes	NA	-6	30	NW	0	0	Precipitation: 0 Snow overcast
481	2024-11-05	NA	NA	Thomas Dahm	NA	AWAR KM 80	>1000	345	East	No	1	-8	40	NW	0	0	Precipitation: 0 Windy
482	2024-11-08	NA	NA	CO FQS	NA	AWAR KM 32	300-1000	0	East	NA	14	-14	30	S	0	0	Precipitation: 0 Light snow
483	2024-11-22	NA	NA	Eric Leonard	NA	AWAR KM 58	300-1000	350	East	No	79	-15	30	N	98	0	Precipitation: 0 Sun & cloud
484	2024-11-24	NA	NA	Thomas Dahm	NA	AWAR KM 61	300-1000	110	East	No	1	-18	40	NW	0	0	Precipitation: 0 Overcast
485	2024-11-27	NA	NA	Thomas dahm Cedric Ookowt	NA	AWAR KM 49	>1000	120	East	No	47	-18	49	NW	0	0	Precipitation: 0 Windy
486	2024-11-28	NA	NA	FQS	NA	Haul Road KM 173	50-100	0	East	No	14	-22	30	NW	0	1	Precipitation: 0 Overcast windy
487	2024-11-28	NA	NA	FQS	NA	Haul Road KM 168	100-300	0	East	No	16	-22	30	NW	0	1	Precipitation: P Overcast
488	2024-11-28	NA	NA	Cedric Ookowt Thomas Dahm	NA	Haul Road KM 133	>1000	40	East	No	148	-24	20	NW	0	0	Precipitation: 0 Sunny
489	2024-11-29	NA	NA	Cedric Ookowt Thomas Dahm	NA	AWAR KM 79	300-1000	85	East	No	54	-26	20	N	0	0	Precipitation: 0 Sunny
490	2024-10-26	NA	NA	Eric L	NA	AWAR KM 6	>1000	155	East	No	55	-8	30	N	89	0	Precipitation: 0 Overcast
491	2024-12-11	NA	NA	Renee pudnak	NA	AWAR KM 80	>1000	5	East	No	32	-27	50	NW	0	1	Precipitation: 0 Cold
492	2024-12-14	NA	NA	Rp	NA	AWAR KM 89	300-1000	5	East	No	20	-23	20	NW	0	1	Precipitation: . Cold
493	2024-12-17	NA	NA	Eric Leonard	NA	AWAR KM 68	>1000	90	East	No	27	-24	40	NW	100	0	Precipitation: 0 Light wind, overcast
494	2024-12-23	NA	NA	Cedric Ookowt	NA	AWAR KM 23	100-300	180	West	No	1	-24	20	SE	0	1	Precipitation: 0 Blowing snow

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
1	2020-04-24	45	60	Snow Bank	0	0	0	6	0	6	0	0	0	6	6	0	6	0	0	6	1	0
2	2020-04-25	50	110	NA	0	0	12	30	30	36	5	0	0	40	1	1	32	0	0	40	0	0
3	2020-08-22	NA	NA	NA	150	0	0	0	0	0	0	0	0	150	0	0	0	0	0	0	0	0
4	2020-08-17	600	700	None	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
5	2020-08-21	NA	NA	NA	0	0	0	58	0	0	16	0	0	42	0	0	16	0	0	42	0	0
6	2020-08-22	NA	NA	NA	45	0	0	0	0	0	35	0	0	0	10	0	0	0	0	45	0	0
7	2020-08-17	150	800	Tower and generator	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
8	2020-08-21	NA	NA	NA	0	0	0	112	0	0	0	0	0	112	0	0	0	0	0	112	0	0
9	2020-04-24	57	70	NA	8	0	6	16	4	1	16	0	9	16	8	0	12	0	2	12	0	0
10	2020-08-12	NA	NA	NA	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
11	2020-08-12	0-100	600	Quarry	28	0	0	13	0	0	23	0	0	22	3	4	0	0	0	23	0	2
12	2020-08-17	400	600	None	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
13	2020-08-12	100	600	None	35	0	0	6	0	0	26	0	0	15	0	0	31	0	0	8	3	0
14	2020-08-12	500	600	Bridge	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
15	2020-08-12	700	500	Bridge	0	0	0	35	1	0	0	0	0	0	0	0	0	0	0	0	18	0
16	2020-08-15	20	500	Bridge at Km 82 and seacan	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
17	2020-05-17	NA	NA	None	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0
18	2020-08-12	100	600	None	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
19	2020-08-15	100	800	None	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
20	2020-08-12	>100	600	None	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0
21	2020-08-15	100	500-600	None	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
22	2020-04-24	40	60	Show Bank	4	0	3	4	0	0	4	0	2	4	0	0	4	0	4	4	0	0
23	2020-05-17	NA	NA	None	42	20	0	3	2	0	40	22	0	3	0	0	37	26	0	2	0	0
24	2020-08-06	600-700	NA	Air strip	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
25	2020-08-17	NA	NA	NA	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0
26	2020-05-18	NA	NA	NA	15	17	1	2	0	0	17	8	10	0	0	0	16	17	2	0	0	0
27	2020-05-06	200-300 east	NA	None	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0
28	2020-08-16	200	1400	waste dump 2 KM south	1	0	0	1	0	0	1	0	0	0	1	0	2	0	0	0	0	0
29	2020-05-03	0	NA	Vault bit, baby phase pit in 100m (w)	8	0	2	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0
30	2020-04-29	200	NA	Seacans at vault laydown 2 KM away	22	0	2	6	2	0	21	0	3	8	0	0	25	0	2	4	1	0
31	2020-05-06	100-200	NA	None	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0
32	2020-05-04	200	200 west, 100 east	Vault waste dump 2 km	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0
33	2020-05-02	500 west; 0 east	NA	None; vault laydown in the distance	0	0	1	8	0	0	0	0	0	8	0	1	0	0	0	9	0	0
34	2020-05-06	500 west, 100 east	NA	Bridge	1	0	0	6	0	0	5	0	0	2	0	0	1	0	0	3	0	0
35	2020-04-29	NA	NA	NA	1	30	0	0	1	0	0	28	4	0	0	0	2	31	0	1	1	0
36	2020-05-10	0	NA	None	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0
37	2020-05-08	0	NA	None	5	0	0	13	0	0	11	0	0	1	1	0	1	0	0	3	0	0
38	2020-04-29	50	NA	NA	11	6	0	6	2	0	20	2	0	5	0	0	15	6	0	5	1	0
39	2020-05-10	500	NA	NA	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
40	2020-05-09	0	NA	None	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
41	2020-05-12	0	NA	None	10	0	0	0	0	0	9	0	0	1	0	0	5	0	0	5	0	0
42	2020-05-01	100 west; 0 east	NA	None	7	0	0	3	0	0	7	0	0	4	0	0	9	0	0	3	0	0
43	2020-05-02	150	NA	None	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
44	2020-05-12	0	NA	None	34	0	1	0	0	0	35	0	0	0	0	0	20	0	0	0	0	0
45	2020-05-01	NA	NA	Bridge at Km 126; seacan on left	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
46	2020-05-03	100 west, 0 east	NA	Bridge 1km from group	20	0	1	11	0	0	6	0	2	23	1	0	0	0	1	31	0	0
47	2020-05-01	50	NA	None	0	0	0	25	1	0	0	0	5	14	3	4	0	0	2	9	3	12
48	2020-05-11	0	NA	None	19	0	0	4	0	0	9	0	0	0	0	0	5	0	0	0	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
49	2020-05-02	NA	NA	NA	11	0	0	0	0	0	9	0	1	1	0	0	10	0	0	1	0	0
50	2020-05-03	200	NA	Bridge	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	1
51	2020-04-29	25	300	Bridge 800m from group; tower 2km from group	6	6	0	0	0	0	4	6	0	2	0	0	4	6	0	2	0	0
52	2020-05-09	1500	NA	NA	20	0	0	5	0	0	24	0	0	1	0	0	17	0	0	1	0	0
53	2020-05-02	50	NA	radio tower	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
54	2020-05-07	100	NA	Tower	6	0	8	5	0	0	0	0	2	17	0	0	6	0	1	2	0	0
55	2020-05-03	200 west, 0 east	NA	Radio tower within 1 km	20	0	1	5	0	0	26	0	2	0	0	0	23	0	1	4	0	0
56	2020-05-07	2500 W, 0 E	NA	None	3	0	0	25	3	10	0	0	5	36	0	0	0	0	0	All	0	0
57	2020-05-10	0	NA	None	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
58	2020-05-04	NA	NA	NA	0	0	2	45	0	0	0	0	0	11	1	0	0	0	0	30	0	0
59	2020-05-11	0	NA	None	0	0	0	8	0	0	0	0	0	8	0	0	2	0	0	6	0	0
60	2020-05-02	NA	NA	None	4	0	0	0	0	0	4	0	0	0	0	0	3	0	0	1	0	0
61	2020-05-04	50 west, 100 east	NA	Bridge at 147 km , spill seacan	0	0	0	2	0	0	2	0	0	1	0	0	3	0	0	0	0	0
62	2020-04-29	Level with tundra	NA	Generator 200m away (not running)	17	0	0	3	2	0	19	0	0	1	1	0	7	0	0	3	1	0
63	2020-04-30	100	NA	NA	0	0	0	4	0	0	3	0	0	1	0	0	0	0	2	0	2	0
64	2020-04-30	NA	NA	NA	24	0	10	0	1	0	0	0	0	18	2	15	0	0	0	24	0	0
65	2020-05-03	NA	NA	NA	0	6	0	0	0	0	0	6	0	0	0	0	0	0	0	6	0	0
66	2020-04-30	100	NA	NA	48	0	0	4	0	0	47	0	0	4	1	0	44	0	0	3	5	0
67	2020-04-29	NA	NA	Brideg 500m away	40	0	0	60	20	0	20	0	50	30	10	0	12	0	52	16	40	0
68	2020-08-07	200	800	NA	0	0	0	33	0	0	0	0	0	140	0	0	0	0	0	196	0	0
69	2020-08-06	0-100	NA	Sand truck	350	0	0	40	0	10	350	0	20	30	0	0	350	25	0	19	0	0
70	2020-05-01	500 west, 100 east	NA	None	2	0	0	1	0	0	1	1	1	0	0	0	1	2	0	0	0	0
71	2020-05-06	1500-2000 west	NA	None	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0
72	2020-08-06	400	NA	None	3	0	0	78	0	0	8	0	0	19	0	4	2	0	0	59	0	5
73	2020-05-02	NA	NA	NA	2	8	0	0	0	0	2	8	0	0	0	0	1	9	0	0	0	0
74	2020-05-03	50 west, 0 east	NA	Bridge at 159 - 2 km away	59	0	0	6	0	0	57	0	2	6	0	0	62	0	0	3	0	0
75	2020-08-07	100	NA	None	24	0	1	6	0	0	26	0	2	3	0	0	23	0	0	4	0	0
76	2020-08-06	NA	NA	Bridge	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0
77	2020-08-06	200	NA	Bridge	280	10	0	100	5	5	306	10	30	50	0	4	300	8	12	78	0	2
78	2020-05-12	0	NA	None	60	0	0	12	0	0	15	0	0	30	0	0	18	0	0	15	0	0
79	2020-05-03	0 wast, 50 east	NA	Bridge at 160 and 159, group was intervene with	7	0	0	0	0	0	2	0	0	5	0	0	4	0	0	3	0	0
80	2020-05-04	100 west, 0 east	NA	Bridge 160-1km	0	18	0	0	0	0	0	18	0	0	0	0	0	16	2	0	0	0
81	2020-04-30	NA	NA	NA	80	3	0	15	2	0	102	4	0	4	0	0	92	3	0	10	2	3
82	2020-08-09	100	600	bridge	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
83	2020-08-07	400	NA	parked long haul truck on the road	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
84	2020-05-07	100	NA	None	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0
85	2020-05-01	100	NA	None	53	0	3	5	1	0	0	0	2	45	5	10	0	0	4	56	2	0
86	2020-05-03	500 wast; 0 eest	NA	NA	0	0	2	9	0	0	1	0	1	9	0	0	0	0	0	11	0	0
87	2020-04-29	NA	NA	NA	0	0	0	10	0	0	0	0	0	2	8	0	0	0	0	9	1	0
88	2020-05-03	NA	NA	NA	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0
89	2020-04-30	400 on wes; 0 on east	NA	None	18	1	0	0	1	0	17	1	0	0	2	0	17	0	0	0	3	0
90	2020-04-29	NA	NA	NA	0	0	0	23	0	0	0	0	0	23	0	0	0	0	0	19	0	4
91	2020-04-30	100 west; 0 east	NA	None	1	0	0	0	1	0	0	2	0	0	0	0	0	2	0	0	0	0
92	2020-04-29	Almost flat	NA	NA	4	0	3	8	0	0	4	0	1	9	1	0	6	0	1	6	2	0
93	2020-05-14	1000	NA	None	1	2	0	1	0	0	1	2	1	0	0	0	2	2	0	0	0	0
94	2020-05-06	200 west, 0 east	200	None	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
95	2020-05-06	300-400	NA	None	0	19	2	0	0	0	0	21	0	0	0	0	0	21	0	0	0	0
96	2020-05-06	100 west, 0 east	NA	NA	29	2	0	1	0	0	25	1	5	1	0	0	30	0	0	2	0	0
97	2020-05-06	NA	NA	NA	0	0	0	34	0	0	4	0	0	30	0	0	0	0	0	34	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
98	2020-05-02	NA	NA	NA	38	0	5	2	0	0	31	0	0	21	0	0	27	0	1	23	4	0
99	2020-05-11	~1000	NA	None	40	43	1	1	0	0	40	40	1	15	0	0	25	0	0	75	0	0
100	2020-08-06	NA	NA	NA	50	0	0	240	4	6	10	0	0	240	2	4	2	0	6	280	0	8
101	2020-08-16	NA	NA	None	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0
102	2020-08-22	NA	NA	NA	0	0	0	29	0	0	0	0	0	0	0	29	0	0	0	29	0	0
103	2020-11-08	100	600	none	337	0	5	8	0	0	342	0	3	4	1	0	340	0	5	3	2	0
104	2020-11-08	100	600	none	15	0	9	36	2	0	23	0	5	23	12	12	25	0	17	57	6	0
105	2020-11-09	100	600	none	33	0	1	0	0	0	34	0	0	0	0	0	28	0	1	5	0	0
106	2020-11-18	100	700	none	0	0	0	26	1	0	0	0	0	27	0	0	0	0	3	23	0	1
107	2020-11-19	100	700	none	0	0	3	36	0	0	3	0	4	32	0	0	0	0	0	39	0	0
108	2020-11-12	100	800	none	40	0	2	0	0	0	38	0	1	3	0	0	34	3	2	2	1	0
109	2020-11-13	50	500	none	205	0	3	4	0	0	198	2	1	11	0	0	184	0	2	26	0	0
110	2020-11-14	125	400	bridge km 49	25	2	0	0	0	0	25	2	0	0	0	0	26	1	0	0	0	0
111	2020-11-14	50	500	none	62	0	3	0	0	0	65	0	4	6	0	0	72	0	2	8	1	0
112	2020-11-14	200	800	quarry	27	0	0	1	0	0	26	0	0	2	0	0	23	0	0	5	0	0
113	2020-11-14	0	600	none	30	0	0	2	0	0	29	0	0	3	0	0	30	0	0	2	0	0
114	2020-11-14	25	600	none	27	0	1	0	3	0	24	0	2	4	1	0	29	0	1	1	0	0
115	2020-11-15	0	10	none	0	0	0	31	0	0	0	0	0	31	0	0	6	0	0	25	0	0
116	2020-11-15	100	500	bridge km 49	22	7	0	0	0	0	21	6	1	1	0	0	21	6	0	2	0	0
117	2021-03-31	NA	NA	Bridge at KM 119	8	0	0	0	0	0	8	0	0	0	0	0	8	0	0	1	0	0
118	2021-04-06	0	6	None	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0
119	2021-04-07	NA	NA	NA	0	51	0	0	1	0	0	52	0	0	0	0	0	52	0	0	0	0
120	2021-04-08	0	NA	Flags	18	0	0	0	0	0	18	0	0	0	0	0	17	0	1	0	0	0
121	2021-04-12	NA	NA	NA	0	0	2	10	0	0	10	0	0	2	0	0	12	0	0	0	0	0
122	2021-04-13	0	0	Flags	5	1	4	18	0	0	0	0	4	19	0	0	0	0	10	11	0	0
123	2021-04-13	0	6	None	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	2	0	0
124	2021-04-13	0	6	None	1	28	0	0	0	0	1	28	0	0	0	0	1	27	1	0	0	0
125	2021-04-13	40	6	None	5	6	0	4	0	0	5	9	1	0	0	0	5	10	0	0	0	0
126	2021-04-14	NA	NA	Flags	30	8	0	3	0	0	32	8	0	1	0	0	26	9	0	6	0	0
127	2021-04-14	NA	NA	NA	60	0	0	2	0	0	60	0	0	2	0	0	61	0	0	1	0	0
128	2021-04-14	NA	NA	NA	75	0	1	0	0	0	76	0	0	0	0	0	76	0	0	0	0	0
129	2021-04-14	NA	NA	NA	48	6	0	0	0	0	45	3	0	4	2	0	43	1	2	14	0	0
130	2021-04-18	0	6	None	42	8	1	1	0	0	38	12	0	2	0	0	39	12	0	1	0	0
131	2021-04-18	0	6	None	0	8	1	15	0	0	4	5	0	5	0	0	0	0	0	0	0	0
132	2021-04-19	0	8	Flags	4	0	0	0	2	0	6	0	0	0	0	0	5	0	0	0	0	0
133	2021-04-19	0	8	Flags	2	4	0	0	0	0	4	2	0	0	0	0	3	2	1	0	0	0
134	2021-04-19	0	8	Flags	5	9	0	0	0	0	5	9	0	0	0	0	5	9	0	0	0	0
135	2021-04-19	0	NA	Flags	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0
136	2021-04-19	0	NA	Flags	0	3	5	0	0	0	2	2	0	0	2	0	0	0	0	0	0	0
137	2021-04-20	5	20	Mine, flags,freshwater barge	9	0	0	1	0	0	9	0	0	1	0	0	10	0	0	0	0	0
138	2021-04-21	0	20	Flags	39	32	0	2	0	0	35	45	0	3	0	0	35	37	0	1	0	0
139	2021-04-22	0	20	Flags	10	0	10	0	0	0	15	5	0	0	0	0	10	10	0	0	0	0
140	2021-04-23	1	2	None	0	0	0	62	0	0	0	0	0	62	0	0	0	0	0	62	0	0
141	2021-04-23	1	2	None	0	0	0	15	0	0	0	0	0	10	0	0	0	0	0	0	0	0
142	2021-04-23	1	2	None	15	6	0	0	0	0	10	8	0	3	0	0	8	8	0	5	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
143	2021-04-23	0	8	Flags, Road	0	0	0	33	0	0	7	0	0	26	0	0	25	0	1	7	0	0
144	2021-04-23	1	4	None	18	0	0	0	0	0	16	0	0	2	0	0	18	0	0	0	0	0
145	2021-04-23	0	8	Flags, Road	80	80	0	50	0	0	80	60	0	80	0	0	30	60	0	40	0	0
146	2021-04-23	1	1	None	0	0	0	8	0	0	0	0	0	8	0	0	0	0	0	8	0	0
147	2021-04-23	1	4	None	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0	0
148	2021-04-24	1	2	None	6	2	0	6	0	0	0	2	8	4	0	0	0	2	0	12	0	0
149	2021-04-24	1	2	None	12	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0
150	2021-04-25	0	10	Flags, Road	0	0	0	10	0	0	0	0	0	31	0	0	0	0	0	31	0	0
151	2021-04-25	0	10	Flags, Road	0	0	0	26	1	0	0	0	0	25	0	0	0	0	0	25	0	0
152	2021-04-26	NA	10	Flags, "Yellow must all sign", road	10	20	0	2	0	0	7	25	0	0	0	0	8	24	0	0	0	0
153	2021-04-26	0	10	Flags, "Yellow must all sign", road	3	29	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0
154	2021-04-26	0	10	Flags, "Yellow must all sign", road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	2021-04-26	0	10	Flags, Road	19	0	0	30	0	0	16	1	2	41	0	0	13	1	0	36	0	0
156	2021-04-26	0	8	Flags, Road	2	0	0	24	0	0	4	0	4	22	0	0	0	0	0	26	0	0
157	2021-04-29	NA	3	NA	19	3	0	0	0	0	19	3	0	0	0	0	19	3	0	0	0	0
158	2021-04-29	NA	3	NA	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0
159	2021-04-29	NA	3	NA	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0
160	2021-04-29	NA	3	NA	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0
161	2021-04-29	NA	7	NA	15	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0
162	2021-04-29	1	7	NA	12	0	0	0	3	0	12	0	0	0	3	0	0	0	0	0	0	0
163	2021-04-29	1	7	NA	13	0	0	2	0	0	13	0	0	2	0	0	15	0	0	0	0	0
164	2021-04-30	1	1	NA	0	0	0	94	0	0	0	0	0	94	0	0	0	0	0	94	0	0
165	2021-04-30	NA	NA	NA	16	0	0	0	0	0	16	0	0	0	0	0	9	0	0	4	0	0
166	2021-05-01	1	1	None	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0
167	2021-05-01	1	1	NA	0	0	0	24	0	0	5	0	0	19	0	0	18	0	0	6	0	0
168	2021-05-01	NA	3	NA	20	0	0	0	0	0	20	0	0	0	0	0	9	0	0	11	0	0
169	2021-05-01	1	1	NA	0	0	0	17	3	4	2	0	0	22	0	0	0	0	0	0	0	0
170	2021-05-01	1	1	NA	0	0	0	24	0	0	0	0	0	4	0	0	0	0	0	4	0	0
171	2021-05-01	NA	4	NA	3	0	0	2	0	0	0	0	0	5	0	0	1	0	0	4	0	0
172	2021-05-01	NA	4	NA	0	0	0	10	0	0	0	0	0	8	0	2	0	0	0	10	0	0
173	2021-05-02	3	5	Berm of rocks, sea can. Other side of road is tailings. Very close to site	0	16	0	0	0	0	0	16	0	0	0	0	0	0	16	0	0	0
174	2021-05-02	1	2	NA	7	0	0	0	0	0	7	0	0	0	0	0	2	0	0	5	0	0
175	2021-05-02	1	2	NA	5	0	0	0	2	0	5	0	0	0	0	2	0	0	0	0	0	0
176	2021-05-02	1	2	NA	4	0	0	3	0	0	7	0	0	0	0	0	7	0	0	0	0	0
177	2021-05-02	NA	4	NA	0	0	0	38	0	0	0	0	0	38	0	0	0	0	0	38	0	0
178	2021-05-02	1	1	NA	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0
179	2021-05-02	1	1	NA	5	0	0	14	3	0	0	0	0	19	0	3	0	0	0	0	0	0
180	2021-05-02	1	1	NA	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0
181	2021-05-03	NA	NA	NA	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0
182	2021-05-03	NA	NA	NA	1	7	0	0	0	0	1	7	0	0	0	0	1	7	0	0	0	0
183	2021-05-03	NA	NA	NA	5	0	0	0	0	0	4	0	0	0	1	0	1	0	0	0	2	0
184	2021-05-03	NA	NA	NA	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	6	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
185	2021-05-04	NA	NA	NA	55	0	0	0	0	0	55	0	0	0	0	0	55	0	0	0	0	0
186	2021-05-04	0	0	"Height: 0,4 and Width 0,5"	37	0	0	14	0	0	32	0	0	19	0	0	25	0	0	26	0	0
187	2021-05-04	NA	NA	Bridge near	0	0	6	0	0	0	0	0	0	0	0	20	5	0	0	11	4	0
188	2021-05-04	1	2	NA	0	0	0	12	0	0	0	0	0	11	0	1	5	0	0	7	0	0
189	2021-05-05	1	2	Emergency sea can and big green sign that says to change channel.	0	0	0	23	0	0	0	0	0	23	0	0	0	0	0	23	0	0
190	2021-05-05	NA	NA	None	46	0	0	2	0	0	48	0	1	1	0	0	27	0	0	25	0	0
191	2021-05-06	NA	NA	NA	6	12	0	0	2	0	7	13	0	0	0	0	9	7	0	0	4	0
192	2021-05-06	NA	NA	NA	0	20	0	0	0	0	0	5	0	1	0	0	0	2	0	5	1	0
193	2021-05-06	NA	NA	None	0	38	3	0	0	0	0	38	0	3	0	0	0	33	1	7	0	0
194	2021-05-06	NA	NA	Radio Tower	10	0	0	0	0	0	9	0	0	1	0	0	6	0	2	2	0	0
195	2021-05-07	0	8	NA	0	0	0	19	0	0	0	0	0	19	0	0	0	0	0	19	0	0
196	2021-05-07	1	1	Sea can and bridge 800-1000 m north of truck (same direction that caribou approached from).	0	0	0	20	0	0	0	0	0	20	0	0	0	0	0	20	0	0
197	2021-05-07	1	1	None	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0
198	2021-05-08	0	0	None	0	0	0	41	0	0	0	0	0	41	0	0	0	0	0	0	0	0
199	2021-05-08	1	1	None	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0
200	2021-05-08	1	1	None	4	0	0	4	0	0	4	0	0	0	0	0	4	0	0	0	0	0
201	2021-05-08	3	7	NA	33	0	0	0	0	0	30	0	0	3	0	0	32	0	1	0	0	0
202	2021-05-08	6	3	NA	24	12	0	0	0	0	18	13	0	1	0	0	17	14	0	1	0	0
203	2021-05-08	1	2	NA	0	1	1	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
204	2021-05-08	1	1	None	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0
205	2021-05-09	1	1	None	2	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0
206	2021-05-10	1	1	None	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
207	2021-05-10	1	1	None	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
208	2021-05-10	1	1	Bridge 100 m north.	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
209	2021-05-11	NA	NA	NA	9	0	2	0	0	0	9	0	2	0	0	0	6	0	0	0	0	0
210	2021-05-11	1	1	None	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
211	2021-05-11	2	1	None	35	0	0	0	0	0	35	0	0	0	0	0	35	0	0	0	0	0
212	2021-05-12	NA	NA	None	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
213	2021-05-12	1	1	"Sea can and bridge 400"	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
214	2021-05-12	1	1	None	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
215	2021-05-13	1	0	NA	25	0	0	5	0	0	30	0	0	0	0	0	30	0	0	0	0	0
216	2021-05-14	1	1	None	7	0	0	22	0	0	3	0	4	20	0	0	18	0	0	0	0	0
217	2021-05-15	1	8	NA	24	0	0	2	0	0	23	0	1	2	0	0	25	0	0	1	0	0
218	2021-05-15	1	1	Mine a few km away	27	0	1	0	0	0	26	0	0	2	0	0	28	0	0	0	0	0
219	2021-05-16	1	1	None	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0
220	2021-05-16	1	1	None	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
221	2021-05-16	1	30	Bridge KM 159,8	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
222	2021-05-17	NA	NA	NA	8	0	0	0	0	0	7	1	0	0	0	0	7	1	0	0	0	0
223	2021-05-17	1	1	None	0	0	0	17	0	0	3	0	0	14	0	0	0	0	0	17	0	0
224	2021-05-18	1	1	Seacan at 800 m	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
225	2021-05-18	1	1	Bridge at 131	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
226	2021-05-18	1	1	None	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
227	2021-05-20	NA	NA	NA	4	15	0	0	0	0	3	16	0	0	0	0	3	16	0	0	0	0
228	2021-05-24	1	15	None	0	0	0	5	0	0	2	0	0	3	0	0	2	0	0	3	0	0
229	2021-05-28	NA	NA	NA	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
230	2021-05-28	NA	NA	NA	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
231	2021-06-04	NA	NA	Near Dyno EMR	12	9	0	0	0	0	11	9	0	0	1	0	12	9	0	0	0	0
232	2021-06-04	NA	NA	Near Dyno EMR	16	4	0	0	0	0	16	4	0	0	0	0	11	9	0	0	0	0
233	2021-06-05	NA	NA	NA	15	3	0	0	0	0	11	7	0	0	0	0	7	8	0	0	0	0
234	2021-06-08	NA	NA	Near Dyno EMR	12	0	0	0	0	0	11	0	0	1	0	0	12	0	0	0	0	0
235	2021-06-08	NA	NA	NA	10	1	0	0	0	0	11	1	0	0	0	0	4	2	0	0	0	0
236	2021-06-09	NA	NA	NA	12	10	0	0	0	0	12	10	0	0	0	0	13	9	0	0	0	0
237	2021-06-18	NA	NA	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
238	2021-08-05	NA	NA	NA	42	3	0	0	0	0	0	3	0	0	0	0	24	5	0	0	0	0
239	2021-08-19	NA	NA	Near Dyno Plant	3	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0
240	2021-08-19	NA	NA	Dyno Plant	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0
241	2021-08-20	NA	NA	NA	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
242	2021-08-20	NA	NA	NA	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
243	2021-08-22	1	NA	Near Landfill	1	1	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0
244	2021-08-22	1	NA	Near Landfill	2	1	0	0	0	0	2	1	0	0	0	0	2	1	0	0	0	0
245	2021-08-24	NA	NA	Near Dyno	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
246	2021-09-28	1	25	NA	7	7	0	0	0	0	13	1	0	0	0	0	14	0	0	0	0	0
247	2021-09-28	1	25	NA	12	2	0	0	0	0	10	4	0	0	0	0	10	4	0	0	0	0
248	2021-10-22	0	10	WRSF	7	0	0	0	0	0	3	0	0	1	0	0	0	0	0	2	0	4
249	2021-11-05	2	2	None	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	2021-12-09	2	8	None	0	8	0	0	0	0	0	8	0	0	0	0	0	8	0	0	0	0
251	2022-01-29	100	2000	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA
252	2022-04-03	100	400	Electrical panel, 5kv line, Nag pile	4	NA	NA	NA	NA	NA	4	NA	1	NA	NA	NA	5	NA	NA	NA	NA	NA
253	2022-04-03	100	400	Electrical panel, 5kv line, Nag pile	3	NA	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
254	2022-04-08	200	400	None	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA
255	2022-04-08	200	500	Flags	13	2	NA	NA	NA	NA	13	2	NA	NA	NA	NA	12	2	NA	1	NA	NA
256	2022-04-09	100	1000	No	0	1	26	26	27	0	0	0	27	27	27	0	0	0	27	27	27	0
257	2022-04-09	200	400	None	20	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	19	NA	NA	1	NA	NA
258	2022-04-09	0	1200	No	0	7	0	0	7	0	0	0	7	0	7	0	7	0	7	7	7	0
259	2022-04-10	100	600	None	50	1	6	3	NA	NA	52	1	4	3	NA	NA	44	6	3	7	NA	NA
260	2022-04-10	200	400	None	30	NA	NA	NA	NA	NA	12	NA	NA	8	10	NA	NA	NA	NA	27	3	NA
261	2022-04-10	100	500	LHT parked	27	NA	NA	3	NA	NA	23	NA	1	5	1	NA	NA	NA	NA	NA	NA	NA
262	2022-04-10	100	500	LHT parked	30	NA	NA	NA	NA	NA	26	NA	NA	2	2	NA	24	NA	NA	5	1	NA
263	2022-04-10	100	400	NA	16	4	NA	NA	NA	NA	16	4	NA	NA	NA	NA	16	4	NA	NA	NA	NA
264	2022-04-10	100	400	NA	7	13	NA	NA	NA	NA	6	13	1	NA	NA	NA	7	13	NA	NA	NA	NA
265	2022-04-10	100	400	NA	7	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
266	2022-04-11	0	2000	Nada	11	19	11	0	0	0	3	19	7	1	0	0	6	19	5	2	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
267	2022-04-11	200	1000	NA	3	3	NA	NA	NA	NA	3	3	NA	NA	NA	NA	14	NA	NA	NA	NA	NA
268	2022-04-14	0	1000	None	13	0	1	1	0	0	12	0	0	3	0	0	8	0	0	7	0	0
269	2022-04-14	0	1500	Vault garage	27	0	0	0	0	0	25	0	0	2	0	0	26	0	0	1	0	0
270	2022-04-14	0	1500	Vault garage	27	0	0	0	0	0	20	0	0	6	1	0	25	0	0	2	0	0
271	2022-04-15	100	1500	NA	NA	NA	NA	35	NA	NA	NA	NA	NA	NA	NA	35	35	NA	NA	NA	NA	NA
272	2022-04-15	21000	1000	No	1	3	1	NA	NA	NA	2	3	NA	NA	NA	NA	2	3	NA	NA	NA	NA
273	2022-04-16	300	1000	No	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA
274	2022-04-16	0	2000	Dyno plant	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0	0
275	2022-04-17	300	1000	NA	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0
276	2022-04-18	200	3000	0	52	39	NA	43	134	NA	51	NA	34	49	134	NA	51	NA	34	49	134	NA
277	2022-04-19	0	1500	None	NA	NA	2	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	NA
278	2022-04-19	800	1000	No	80	NA	23	20	NA	NA	100	NA	NA	23	NA	NA	100	NA	23	NA	NA	NA
279	2022-04-19	0	1500	None	17	10	NA	NA	NA	NA	17	10	NA	NA	NA	NA	17	10	NA	NA	NA	NA
280	2022-04-19	0	1500	None	14	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA
281	2022-04-19	0	1000	Surface drill nearby	12	NA	NA	1	NA	NA	12	NA	NA	2	NA	NA	14	NA	NA	NA	NA	NA
282	2022-04-20	300	1000	None	7	NA	NA	NA	NA	NA	2	NA	4	NA	NA	NA	4	NA	1	NA	NA	NA
283	2022-04-20	300	800	NA	42	10	30	NA	NA	NA	60	NA	24	NA	NA	NA	42	20	22	NA	NA	NA
284	2022-04-20	200	1600	No	5	NA	NA	2	NA	NA	6	NA	NA	1	NA	NA	5	NA	2	NA	NA	NA
285	2022-04-21	300	1000	No	13	1	NA	NA	NA	NA	8	2	NA	NA	NA	NA	7	2	NA	NA	NA	NA
286	2022-04-21	200	1500	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	2	NA	NA	NA
287	2022-04-21	100	1600	NA	7	NA	NA	8	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	16	NA	NA
288	2022-04-21	200	1600	NA	11	NA	NA	11	NA	NA	11	NA	NA	11	NA	NA	1	NA	2	NA	NA	NA
289	2022-04-21	100	2000	None	7	0	0	10	1	0	10	0	2	6	0	0	1	0	0	3	0	0
290	2022-04-22	0	2000	None	25	34	4	0	1	0	45	6	0	13	0	0	30	21	0	13	0	0
291	2022-04-22	0	2000	None	30	34	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
292	2022-04-22	0	2000	None	0	0	0	67	0	0	5	0	0	10	0	0	0	0	0	15	0	0
293	2022-04-22	200	2000	None	9	NA	NA	12	NA	NA	21	NA	NA	NA	NA	NA	21	NA	NA	NA	NA	NA
294	2022-04-22	200	1000	NA	NA	12	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	12	NA	NA	NA	NA
295	2022-04-22	400	2500	None	NA	8	2	NA	NA	NA	NA	7	3	NA	NA	NA	NA	9	1	NA	NA	NA
296	2022-04-22	0	2000	No	34	1	4	0	0	0	24	10	5	0	0	0	34	5	0	0	0	0
297	2022-04-22	300	2500	None	NA	9	1	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA
298	2022-04-22	0	2000	None	14	0	0	0	0	0	9	0	0	5	0	0	5	0	0	9	0	0
299	2022-04-24	0	0	NA	7	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA
300	2022-04-25	100	1500	Nada	0	0	9	9	9	0	3	0	9	1	2	0	9	0	9	1	0	0
301	2022-04-26	100	400	NA	NA	NA	NA	25	NA	NA	20	NA	NA	5	NA	NA	25	NA	NA	NA	NA	NA
302	2022-04-26	100	3000	No	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA
303	2022-04-27	200	400	None	6	0	0	4	0	0	0	0	3	7	0	0	0	0	10	0	0	0
304	2022-04-27	100	1500	NA	36	0	0	0	0	0	36	0	0	0	0	0	36	0	0	0	0	0
305	2022-04-29	0	800	Nada	0	0	2	2	2	2	0	0	2	2	2	0	0	0	1	1	0	0
306	2022-04-30	200	600	IVR WRSF	15	0	0	7	0	0	18	0	0	4	0	0	20	0	0	2	0	0
307	2022-05-03	200	700	Pad K on East side of road	0	32	1	0	0	0	1	31	1	0	0	0	1	32	0	0	0	0
308	2022-05-04	100	1200	Airport	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
309	2022-05-05	100	1000	Vent raise storage pile nearby	5	15	NA	NA	NA	NA	14	6	NA	NA	NA	NA	14	6	NA	NA	NA	NA
310	2022-05-07	300	1000	IVR WRSF, IVR att. Pond, IVR dike, Road 35, PAD K, Fuel farm.	7	0	0	3	0	0	10	0	0	0	0	0	5	0	1	4	0	0
311	2022-05-12	200	2000	None	12	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	11	NA	NA	1	NA	NA
312	2022-05-15	0	800	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
313	2022-05-19	300	2000	NA	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
314	2022-06-14	0	1000	No	0	7	5	6	0	0	0	7	5	7	0	0	0	8	6	5	0	0
315	2022-07-31	100	700	NA	0	8	2	0	0	0	0	9	1	0	0	0	0	10	0	0	0	0
316	2022-07-31	-100	600	0	11	0	0	0	0	0	8	0	0	3	0	0	11	0	0	0	0	0
317	2022-07-31	500	1000	NA	10	0	0	0	0	0	10	0	0	0	0	0	7	0	0	3	0	0
318	2022-08-01	100	1200	Zero	4	0	4	4	4	0	4	0	4	4	0	0	4	0	4	4	0	0
319	2022-08-01	100	1200	Zero	15	6	24	24	0	7	24	6	24	24	4	6	27	3	27	27	4	3
320	2022-08-01	100	1500	NA	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
321	2022-08-01	200	1500	NA	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
322	2022-08-02	100	600	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0
323	2022-08-02	400	1500	NA	0	0	0	7	0	0	0	0	0	7	0	0	7	0	0	0	0	0
324	2022-08-03	100	1500	NA	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0
325	2022-08-04	200	800	NA	3	0	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0
326	2022-08-04	100	700	NA	7	0	0	1	0	0	2	0	0	0	0	0	1	0	0	0	0	0
327	2022-08-04	200	1500	NA	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0
328	2022-08-04	300	600	NA	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
329	2022-08-04	200	1500	NA	4	0	0	1	0	0	4	0	0	1	0	0	0	0	0	5	0	0
330	2022-08-09	200	2500	Long haul truck	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
331	2022-08-26	200	500	Seaman's	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0
332	2022-09-23	300	1500	Berm	4	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
333	2022-09-24	100	1400	Flag	4	0	1	0	0	0	3	2	0	0	1	0	3	3	0	0	1	0
334	2022-09-26	200	1000	0	3	0	0	3	0	0	3	0	0	1	1	1	6	0	0	0	0	0
335	2022-10-04	200	1500	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
336	2022-10-04	100	1500	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
337	2022-10-04	100	700	O	10	0	0	16	0	0	20	0	0	6	0	0	26	0	0	0	0	0
338	2022-10-07	200	1500	NA	13	0	0	12	0	0	0	0	0	25	0	0	0	0	0	25	0	0
339	2022-10-08	200	1000	NA	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
340	2022-10-15	200	1000	NA	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50	0	0
341	2022-10-21	200	1200	No	40	10	10	0	0	0	45	8	7	0	0	0	8	2	27	23	0	0
342	2022-10-30	2000	700	No	0	0	0	60	0	0	0	0	5	55	0	0	0	0	0	60	0	0
343	2022-11-02	200	700	No	22	4	0	0	0	0	22	4	0	0	0	0	26	0	0	0	0	0
344	2022-11-02	100	3000	0	0	0	0	338	0	0	0	0	0	338	0	0	0	0	0	338	0	0
345	2022-11-10	0	1000	NA	51	0	0	0	0	0	43	0	8	0	0	0	51	0	0	0	0	0
346	2022-11-12	100	500	NA	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0
347	2022-11-13	100	800	Road	0	0	0	51	0	0	0	0	0	51	0	0	0	0	0	51	0	0
348	2022-11-17	200	700	None	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
349	2022-11-17	100	800	No	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
350	2022-11-17	300	1000	No	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50	0	0
351	2022-11-18	0	1000	0	3	0	2	0	0	0	2	0	3	0	0	0	4	0	1	0	0	0
352	2022-11-20	0	1200	Nada	0	0	0	96	96	0	0	0	0	96	0	0	0	0	0	96	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
353	2022-11-23	200	800	Bridge	26	2	1	0	0	0	25	2	0	2	0	0	25	4	0	0	0	0
354	2022-11-26	100	2000	Tire stop near	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
355	2023-03-30	100	1000	No	5	0	0	5	0	0	0	0	0	0	10	0	3	0	0	3	0	0
356	2023-03-31	100	500	NA	0	56	0	0	0	0	0	64	0	2	0	0	0	54	0	2	0	0
357	2023-04-01	0	900	No	10	0	5	15	0	0	10	0	5	15	0	0	21	0	0	9	0	0
358	2023-04-01	200	700	No	0	0	0	10	0	0	0	0	0	10	0	0	0	7	3	0	0	0
359	2023-04-01	100	900	No	0	48	2	0	0	0	0	46	2	2	0	0	0	50	0	0	0	0
360	2023-04-03	100	1500	No	20	10	0	0	0	0	5	10	5	10	0	0	0	20	10	0	0	0
361	2023-04-04	0	1000	No	5	0	0	35	0	0	8	0	0	32	0	0	0	0	0	33	7	0
362	2023-04-05	200	1200	Nada	0	0	0	56	0	0	0	0	1	49	3	3	25	0	16	15	0	0
363	2023-03-30	100	500	NA	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
364	2023-04-08	0	1600	No	46	4	0	0	0	0	38	12	0	0	0	0	30	10	10	0	0	0
365	2023-04-07	500	600	0	0	0	0	30	0	0	0	0	0	30	0	0	0	0	1	25	3	1
366	2023-04-14	0	1200	Flags	0	0	0	93	0	0	0	0	0	93	0	0	0	0	0	93	0	0
367	2023-04-12	0	1800	Flags	0	0	0	34	0	0	0	0	0	34	0	0	0	0	0	34	0	0
368	2023-04-10	0	1000	0	1	0	4	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0
369	2023-04-15	300	300	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0
370	2023-04-15	300	300	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0
371	2023-04-14	1000	800	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0
372	2023-04-14	1000	800	Vault	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
373	2023-04-14	1500	1200	Vault	3	7	0	0	0	0	1	7	2	0	0	0	4	6	0	0	0	0
374	2023-04-15	100	600	0	4	0	0	0	0	0	2	0	2	0	0	0	3	0	0	1	0	0
375	2023-04-12	0	1500	0	7	73	0	0	0	0	5	75	0	0	0	0	5	75	0	0	0	0
376	2023-04-09	3000	800	0	0	0	5	5	0	0	0	0	2	8	0	0	0	0	0	10	0	0
377	2023-04-10	100	900	Tower light, flags	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0
378	2023-04-10	100	800	None	55	0	0	0	0	0	44	0	0	11	0	0	38	0	0	14	0	0
379	2023-04-11	100	900	None	44	0	0	3	0	0	46	0	0	1	0	0	46	1	0	1	0	0
380	2023-04-11	100	900	NA	0	3	45	0	0	0	0	13	29	6	0	0	0	44	4	0	0	0
381	2023-04-14	100	900	None	10	0	4	2	0	0	7	0	0	5	0	0	4	0	0	6	2	0
382	2023-04-14	0	2000	None	16	0	0	0	0	0	14	0	2	0	0	0	14	0	0	0	0	0
383	2023-04-14	0	2500	None	3	0	0	0	0	0	1	0	0	0	2	0	2	0	0	0	1	0
384	2023-04-15	2000	1000	0	0	0	0	8	0	0	0	0	0	18	0	0	0	0	0	8	0	0
385	2023-04-16	0	800	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
386	2023-04-16	0	800	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0
387	2023-04-18	500	1500	0	88	0	0	18	0	0	88	0	0	18	0	0	94	0	0	8	0	0
388	2023-04-17	0	0	0	0	0	0	31	0	0	29	0	0	0	2	0	0	0	0	0	31	0
389	2023-04-19	400	400	NA	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2	0	0
390	2023-04-19	400	400	NA	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
391	2023-04-30	100	1200	Ridge, ccan	0	0	2	0	2	0	0	0	0	2	2	0	0	0	2	0	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
392	2023-05-23	200	1000	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
393	2023-06-21	100	800	No	0	4	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0
394	2023-10-24	200	1000	None	10	0	0	0	1	0	10	0	0	1	0	0	11	0	0	0	0	0
395	2023-10-22	300	1000	Road	0	0	8	0	0	0	0	0	7	1	0	0	0	0	0	8	0	0
396	2023-10-24	200	1000	None	2	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0
397	2023-10-27	0	2000	None	24	0	1	1	0	0	18	0	0	8	0	0	25	0	0	0	0	0
398	2023-10-27	100	2000	None	10	10	0	0	0	0	12	8	0	2	0	0	11	9	0	0	0	0
399	2023-10-27	200	2000	None	8	16	0	1	0	0	7	18	0	0	0	0	7	18	0	0	0	0
400	2023-10-28	200	800	NA	23	0	2	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA
401	2023-10-28	100	900	Bridge	0	0	0	20	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
402	2023-10-31	100	1000	0	16	0	0	3	0	0	19	0	0	0	0	0	19	0	0	0	0	0
403	2023-11-02	100	900	Barrel	6	0	0	0	0	0	7	3	0	3	0	0	8	0	0	5	0	0
404	2023-11-02	0	1000	Sea cans	0	4	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0
405	2023-10-29	100	1000	None	3	0	0	4	0	0	8	0	0	0	0	0	0	0	0	1	0	0
406	2023-11-07	200	600	O	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0
407	2023-11-06	500	1000	NA	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
408	2023-11-09	100	500	No	100	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0
409	2023-11-12	200	1000	P	26	0	0	0	0	0	25	0	0	1	0	0	0	0	0	26	0	0
410	2023-11-08	100	1000	Emergency seaman	15	0	15	0	0	0	12	0	14	0	0	0	14	0	14	2	0	0
411	2023-11-11	300	300	No	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
412	2023-11-11	300	200	0	100	0	100	100	100	0	0	0	100	100	100	100	NA	NA	NA	NA	NA	NA
413	2023-11-11	3000	200	0	13	15	15	0	27	0	15	4	15	15	15	0	0	0	27	27	27	0
414	2023-11-01	0	2000	None	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
415	2023-11-17	200	1000	None	0	0	0	50	0	0	0	0	1	49	0	0	2	2	7	39	0	0
416	2023-11-18	0	1200	None	9	9	2	5	0	0	20	0	5	0	0	0	13	0	10	2	0	0
417	2023-12-06	100	500	NA	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0
418	2023-12-06	100	400	NA	1	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
419	2023-12-01	100	1000	0	0	0	0	4	0	0	4	0	0	0	0	0	4	0	0	0	0	0
420	2023-12-08	0	1000	No	0	0	13	0	0	0	0	0	13	0	0	0	0	0	13	0	0	0
421	2023-12-12	0	1000	No	12	0	0	0	0	0	9	0	0	3	0	0	9	0	0	3	0	0
422	2023-12-16	70000	200	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
423	2023-12-17	2000	200	0	43	0	43	0	0	0	43	0	43	0	0	0	43	0	43	0	0	0
424	2023-12-18	500	200	0	187	0	187	0	0	0	187	0	187	0	0	0	187	0	187	0	0	0
425	2024-01-01	100	1000	NA	60	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0	0	0
426	2024-01-02	-1000	1000	0	35	9	0	0	0	0	39	9	0	0	0	0	35	9	0	0	0	0
427	2024-01-04	100	2000	NA	21	0	0	4	0	0	21	0	0	4	0	0	25	0	0	0	0	0
428	2024-01-06	100	1200	None	27	0	0	0	0	0	17	0	5	5	0	0	5	0	5	5	13	0
429	2024-01-11	0	200	0	0	0	43	43	0	0	0	0	0	43	0	0	0	0	0	43	0	0
430	2024-02-10	0	1200	Zero	19	6	2	0	0	0	8	10	2	7	0	0	9	10	3	0	0	0
431	2024-02-21	1000	1000	None	2	2	0	0	0	0	2	2	0	0	0	0	1	3	0	0	0	0
432	2024-03-09	0	1200	None	9	2	0	1	0	0	8	2	2	0	0	0	7	2	3	0	0	0
433	2024-04-06	300	1600	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
434	2024-04-06	300	1600	None	0	5	2	2	0	0	0	4	0	5	0	0	0	2	0	7	0	0
435	2024-04-08	0	1600	None	45	0	0	0	0	0	0	0	0	45	0	0	0	0	0	45	0	0
436	2024-04-11	300	2000	Bridge	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0	0	0
437	2024-04-15	5000	300	NA	4	8	0	0	0	0	3	9	0	0	0	0	2	10	0	0	0	0
438	2024-04-16	100	300	NA	0	11	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	0
439	2024-04-18	100	500	NA	3	0	0	0	0	0	2	0	0	0	1	0	3	0	0	0	0	0
440	2024-04-18	1500	500	NA	28	12	2	8	0	0	30	12	0	8	0	0	30	12	6	2	0	0
441	2024-04-19	0	2000	None	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0
442	2024-04-23	100	600	NA	2	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
443	2024-04-22	0	500	NA	2	0	0	0	0	0	1	0	0	1	0	0	2	0	0	0	0	0
444	2024-04-22	100	500	No	7	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0
445	2024-04-25	0	600	NA	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
446	2024-04-24	100	500	No	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0
447	2024-04-22	200	1000	0	144	0	0	0	0	0	144	0	0	0	0	0	131	0	0	13	0	0
448	2024-04-22	300	1000	0	46	0	0	0	0	0	46	0	0	0	0	0	46	0	0	0	0	0
449	2024-04-23	200	1000	0	0	8	0	72	0	0	81	5	0	24	0	0	78	2	0	7	0	0
450	2024-04-25	1000	1000	0	0	0	0	2	0	0	0	0	0	2	0	0	2	0	0	0	0	0
451	2024-04-19	0	700	0	42	7	4	2	0	0	NA	NA	NA	NA	NA	NA	37	5	1	12	0	0
452	2024-04-19	0	700	0	10	0	5	11	0	0	12	0	2	12	0	0	7	0	0	13	0	0
453	2024-04-19	0	700	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	4	0	0
454	2024-05-05	200	1400	No	42	0	0	0	0	0	42	0	0	0	0	0	42	0	0	0	0	0
455	2024-04-23	100	2500	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	0	0	0	0	0
456	2024-04-23	100	2500	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
457	2024-05-09	1000	1000	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0
458	2024-05-12	1500	1000	NA	7	15	0	10	0	0	7	15	2	8	0	0	10	15	0	7	0	0
459	2024-05-09	100	1600	None	0	0	2	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0
460	2024-05-08	100	1500	None	0	0	0	34	0	0	8	0	3	23	0	0	8	0	5	21	0	0
461	2024-05-09	400	900	NA	3	14	0	0	0	0	1	16	0	0	0	0	0	15	2	0	2	0
462	2024-06-25	100	800	NA	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0
463	2024-07-05	300	2500	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
464	2024-07-08	300	2500	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
465	2024-05-09	300	2500	No	40	0	0	0	0	0	40	0	0	0	0	0	40	0	0	0	0	0
466	2024-07-26	200	1000	NA	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
467	2024-08-11	100	1000	NA	0	0	0	0	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
468	2024-09-30	0	1000	WT WRSF	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
469	2024-10-05	500	1000	0	13	0	0	25	0	0	38	0	0	0	0	0	38	0	0	39	0	0
470	2024-10-15	100	200	NA	8	0	8	0	8	0	8	0	8	0	0	0	0	0	0	8	8	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Road Height Cm	Road Side Width Cm	Structures Present	Feeding 0	Laying 0	Standing 0	Walking 0	Alert 0	Trotting 0	Feeding 3	Laying 3	Standing 3	Walking 3	Alert 3	Trotting 3	Feeding 6	Laying 6	Standing 6	Walking 6	Alert 6	Trotting 6
471	2024-10-17	200	1000	0	33	20	20	16	0	0	40	10	29	10	0	0	25	0	20	29	15	0
472	2024-10-20	100	200	0	0	33	0	0	0	0	0	33	0	0	0	0	0	33	0	0	0	0
473	2024-10-22	0	1000	0	1	0	0	1	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
474	2024-10-27	1000	1500	0	75	10	9	0	0	0	85	5	4	0	0	0	94	0	0	0	0	0
475	2024-10-27	1000	1500	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0
476	2024-10-28	0	1500	0	16	0	0	0	0	0	12	0	0	4	0	0	12	0	4	0	0	0
477	2024-10-31	1000	1500	0	8	7	0	0	0	0	9	0	1	3	0	0	5	2	0	6	0	0
478	2024-11-01	0	1500	0	0	0	0	7	0	0	0	0	0	7	0	0	7	0	0	0	0	0
479	2024-11-01	0	1500	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
480	2024-11-04	100	800	No	180	0	0	20	0	0	175	0	0	25	0	0	0	0	0	200	0	0
481	2024-11-05	0	1500	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
482	2024-11-08	0	900	O	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0
483	2024-11-22	-100	1500	None	78	0	0	1	0	0	79	0	0	0	0	0	77	0	0	2	0	0
484	2024-11-24	0	1000	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
485	2024-11-27	1500	1000	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0
486	2024-11-28	0	900	No	14	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14	0	0
487	2024-11-28	300	1100	No	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0
488	2024-11-28	-500	1500	0	14	11	0	0	0	0	11	8	6	0	0	0	11	14	0	0	0	0
489	2024-11-29	0	1500	0	54	0	0	0	0	0	NA	NA	NA	NA	NA	NA	49	2	0	3	0	0
490	2024-10-26	0	1500	None	10	0	5	40	0	0	4	0	8	28	0	0	5	0	1	12	0	0
491	2024-12-11	100	200	0	32	0	0	0	0	0	NA	NA	NA	NA	NA	NA	0	0	0	32	0	0
492	2024-12-14	100	200	0	20	0	0	0	0	0	6	14	0	0	0	0	2	18	0	0	0	0
493	2024-12-17	100	1500	None	0	0	0	27	0	0	0	0	0	27	0	0	0	0	0	48	0	0
494	2024-12-23	-50000	1000	None	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
1	2020-04-24	5	0	0	6	6	6	6	0	0	0	2	0	6	0	0	6	0	0	6	0	4	6	0	0	5	0	4	6
2	2020-04-25	40	0	2	40	5	0	5	0	1	40	0	0	16	0	0	40	4	2	27	0	7	40	3	1	40	0	6	40
3	2020-08-22	0	0	0	150	0	0	0	0	0	150	0	0	0	0	0	150	0	0	0	0	0	150	0	0	0	0	0	0
4	2020-08-17	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
5	2020-08-21	0	0	0	58	0	0	0	0	0	58	0	0	0	0	0	58	0	0	0	0	0	58	0	0	0	0	0	58
6	2020-08-22	45	0	0	0	0	0	0	0	0	45	0	0	0	0	0	45	0	0	0	0	0	0	0	0	NA	NA	NA	NA
7	2020-08-17	0	0	0	1	0	0	0	0	0	1	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	2020-08-21	112	0	0	0	0	0	112	0	0	0	0	0	112	0	0	0	0	0	112	0	0	0	0	0	62	0	0	60
9	2020-04-24	7	0	1	7	1	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	2020-08-12	30	0	6	100	0	0	20	0	0	130	0	8	43	0	0	150	2	10	50	0	0	162	0	0	105	0	0	100
12	2020-08-17	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0
13	2020-08-12	29	0	0	12	0	0	6	0	4	10	0	0	0	0	0	11	0	0	0	0	0	0	0	0	NA	NA	NA	NA
14	2020-08-12	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0
15	2020-08-12	6	0	0	0	10	3	14	0	0	0	2	0	0	0	0	12	0	0	0	6	2	3	1	0	0	0	0	6
16	2020-08-15	1	0	0	1	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	0	2	0	0	0
17	2020-05-17	1	1	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
18	2020-08-12	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
19	2020-08-15	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
20	2020-08-12	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
21	2020-08-15	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0
22	2020-04-24	4	0	3	4	0	0	4	0	2	4	0	0	3	0	1	4	0	0	2	0	1	4	0	0	4	0	4	4
23	2020-05-17	36	27	0	2	2	0	34	27	0	4	2	0	32	32	1	2	0	0	25	34	0	4	2	0	28	33	0	4
24	2020-08-06	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
25	2020-08-17	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
26	2020-05-18	12	20	0	3	0	0	13	14	0	3	0	0	15	13	0	2	0	0	19	11	2	0	0	0	18	11	0	1
27	2020-05-06	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	21	1	0
28	2020-08-16	1	0	0	1	0	0	2	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	2	0	0	0
29	2020-05-03	9	1	0	0	0	0	6	1	2	1	0	0	8	2	0	0	0	0	7	2	1	0	0	0	8	2	0	0
30	2020-04-29	25	0	1	6	0	0	27	0	0	5	0	0	26	0	2	4	0	0	20	5	0	5	2	0	18	4	2	7
31	2020-05-06	0	0	0	12	0	0	0	0	0	6	0	0	0	0	0	2	0	0	0	0	0	0	0	0	NA	NA	NA	NA
32	2020-05-04	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	9	1	0	0	0	0	10	0	0
33	2020-05-02	0	0	0	9	0	0	0	0	0	9	0	0	0	0	0	8	0	1	1	0	2	5	0	0	1	0	2	5
34	2020-05-06	0	0	0	5	0	0	5	0	0	1	0	0	7	0	0	0	0	0	5	0	0	0	0	0	6	0	1	0
35	2020-04-29	1	0	0	1	3	0	0	34	1	0	0	0	1	34	0	0	0	0	0	35	0	0	0	0	0	35	0	0
36	2020-05-10	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0
37	2020-05-08	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
38	2020-04-29	17	8	0	3	0	0	19	5	0	2	2	0	18	5	0	4	1	0	13	10	0	3	2	0	11	11	1	2
39	2020-05-10	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
40	2020-05-09	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0
41	2020-05-12	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0
42	2020-05-01	12	0	1	4	0	0	18	0	2	5	0	0	17	0	3	6	0	0	17	0	0	18	0	0	21	0	2	11
43	2020-05-02	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
44	2020-05-12	6	0	0	1	0	0	10	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0
45	2020-05-01	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
46	2020-05-03	0	0	2	30	0	0	0	0	1	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
47	2020-05-01	0	0	0	26	0	0	0	0	0	26	0	0	0	0	0	26	0	0	0	0	1	25	0	0	0	0	2	24
48	2020-05-11	5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
49	2020-05-02	10	0	0	1	0	0	10	0	0	1	0	0	9	0	1	1	0	0	8	0	0	3	0	0	13	0	0	1
50	2020-05-03	1	0	0	1	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
51	2020-04-29	5	6	0	1	0	0	6	6	0	0	0	0	5	6	0	1	0	0	4	6	0	2	0	0	3	7	0	0
52	2020-05-09	14	0	3	0	0	0	10	0	1	6	0	0	15	0	0	0	0	0	15	0	0	0	0	0	13	2	0	0
53	2020-05-02	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
54	2020-05-07	11	0	0	1	0	0	1	0	0	10	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
55	2020-05-03	25	0	0	3	0	0	21	0	1	6	0	0	18	0	0	5	0	5	18	0	0	10	0	0	18	0	0	10
56	2020-05-07	0	0	6	39	0	0	10	0	13	22	0	0	25	0	0	6	0	0	8	0	0	17	0	0	10	0	0	2
57	2020-05-10	14	0	1	0	0	0	12	0	0	0	0	0	14	0	0	1	0	0	20	0	2	6	0	0	32	0	0	0
58	2020-05-04	0	0	38	5	0	0	0	0	29	18	0	0	5	0	15	12	0	0	8	0	0	23	0	1	6	1	0	5
59	2020-05-11	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	2020-05-02	4	0	0	0	0	0	4	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0
61	2020-05-04	2	0	0	1	0	0	3	0	0	0	0	0	3	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0
62	2020-04-29	6	0	0	4	0	0	8	0	3	4	0	0	9	0	0	3	0	0	7	0	0	4	0	0	10	0	0	3
63	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
64	2020-04-30	0	0	0	20	2	2	0	1	7	10	6	0	0	0	1	20	3	0	0	0	0	26	4	0	0	0	6	10
65	2020-05-03	0	0	1	5	0	0	0	0	0	6	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
66	2020-04-30	43	0	3	2	4	0	39	5	2	4	2	0	43	5	0	3	1	0	35	14	0	2	1	0	29	16	0	5
67	2020-04-29	30	0	45	35	15	0	27	0	20	50	20	8	15	0	10	50	20	0	10	0	0	70	10	5	15	3	0	66
68	2020-08-07	0	0	0	239	0	0	0	0	0	314	1	0	0	0	0	427	3	0	3	0	0	512	4	0	0	0	0	533
69	2020-08-06	300	25	0	20	0	0	260	20	5	15	0	0	248	38	0	12	2	0	200	0	7	22	1	0	150	40	0	8
70	2020-05-01	0	3	0	0	0	0	8	5	0	0	2	0	6	8	0	0	1	0	5	8	2	0	0	0	4	10	0	1
71	2020-05-06	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0
72	2020-08-06	8	0	0	55	0	2	3	0	0	83	0	0	0	0	0	88	0	10	0	0	0	35	0	2	0	0	0	48
73	2020-05-02	0	0	0	0	0	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
74	2020-05-03	59	0	3	3	0	0	56	7	0	2	0	0	54	8	1	2	0	0	50	6	1	3	0	0	32	3	2	2
75	2020-08-07	27	0	0	2	0	0	25	0	0	0	0	0	25	3	0	2	0	0	21	4	2	0	0	0	20	0	0	7
76	2020-08-06	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
77	2020-08-06	250	2	20	120	4	4	48	2	0	100	0	0	150	8	12	30	0	0	83	4	1	7	0	0	67	3	1	2
78	2020-05-12	13	0	0	15	0	0	10	0	0	22	0	0	7	0	2	13	0	0	16	0	5	0	0	0	17	0	3	1
79	2020-05-03	5	0	1	1	0	0	7	0	0	0	0	0	6	0	0	1	0	0	5	0	0	2	0	0	7	0	0	0
80	2020-05-04	0	12	4	0	0	0	0	15	3	0	0	0	0	18	0	0	0	0	0	17	0	1	0	0	0	18	0	0
81	2020-04-30	85	0	0	21	2	2	94	2	0	11	3	0	103	0	0	6	1	0	90	0	0	18	2	0	73	0	0	34
82	2020-08-09	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1
83	2020-08-07	1	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
84	2020-05-07	6	0	0	0	0	0	5	0	1	1	0	0	3	0	0	2	0	0	3	0	0	1	0	0	0	0	0	1
85	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
86	2020-05-03	0	0	0	11	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	0	0	11	0	0	6	0	0	2
87	2020-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
88	2020-05-03	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2
89	2020-04-30	19	0	0	0	1	0	16	0	0	3	1	0	20	0	0	0	0	0	13	0	0	5	2	0	0	0	0	15
90	2020-04-29	0	0	18	5	0	0	0	0	0	23	0	0	15	0	2	6	0	0	6	0	1	16	0	0	NA	NA	NA	NA
91	2020-04-30	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
92	2020-04-29	14	0	0	0	1	0	13	0	1	2	0	0	16	0	0	0	0	0	16	0	0	0	0	0	14	0	0	2
93	2020-05-14	1	0	0	3	0	0	2	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	3	0	0	1
94	2020-05-06	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
95	2020-05-06	0	11	10	0	0	0	1	20	0	0	0	0	1	20	0	0	0	0	1	17	3	0	0	0	0	21	0	0
96	2020-05-06	28	0	2	2	0	0	28	0	0	2	0	0	32	0	0	0	0	0	27	0	2	3	0	0	25	0	3	5
97	2020-05-06	0	0	3	31	0	0	32	0	0	2	0	0	21	0	3	10	0	0	6	0	3	0	0	0	6	0	0	11

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
98	2020-05-02	22	0	0	27	3	0	17	0	4	16	1	0	26	0	2	14	0	0	21	0	2	18	0	0	19	0	4	26
99	2020-05-11	50	0	0	50	0	0	100	0	0	100	0	0	75	4	0	0	0	0	100	0	0	0	0	0	100	0	0	1
100	2020-08-06	50	0	2	240	2	0	30	0	0	216	4	0	4	0	0	40	2	150	6	0	0	20	3	120	0	0	0	0
101	2020-08-16	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0
102	2020-08-22	0	0	0	29	0	0	0	0	0	29	0	0	0	0	0	29	0	0	0	0	0	29	0	0	0	0	0	0
103	2020-11-08	306	0	31	8	5	0	312	0	17	5	16	0	330	0	15	2	3	0	326	0	17	3	4	0	324	5	20	0
104	2020-11-08	47	0	11	24	15	3	104	2	4	23	2	0	100	1	5	26	3	0	89	0	4	34	2	0	97	0	3	32
105	2020-11-09	34	0	0	0	0	0	52	0	0	0	0	0	52	0	0	0	0	0	49	0	2	1	0	0	3	0	0	49
106	2020-11-18	3	0	2	22	0	0	0	0	0	24	0	3	0	0	2	23	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
107	2020-11-19	39	0	0	0	0	0	37	0	2	0	0	0	39	0	0	0	0	0	27	0	0	12	0	0	18	0	5	16
108	2020-11-12	34	7	2	1	1	0	0	0	0	0	0	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
109	2020-11-13	185	0	3	24	0	0	160	6	2	44	0	0	136	3	4	69	0	0	130	6	2	3	1	0	74	5	3	57
110	2020-11-14	23	2	0	2	0	0	22	2	0	3	0	0	25	1	0	1	0	0	25	0	0	2	0	0	24	0	0	3
111	2020-11-14	80	0	0	72	2	0	80	0	0	75	1	3	102	3	0	55	0	0	160	0	0	5	0	0	152	0	2	6
112	2020-11-14	27	0	0	1	0	0	15	0	1	2	0	0	17	0	0	0	0	0	18	0	0	0	0	0	17	0	1	0
113	2020-11-14	16	0	2	67	0	0	5	0	0	93	0	25	0	0	0	77	6	40	0	0	5	30	8	40	0	0	0	20
114	2020-11-14	28	0	2	1	0	0	39	0	0	2	0	0	30	0	0	1	0	0	28	0	0	2	1	0	26	0	0	5
115	2020-11-15	21	0	0	10	0	0	27	0	0	3	1	0	31	0	0	0	0	0	29	0	1	1	0	0	30	0	1	0
116	2020-11-15	24	5	0	0	0	0	24	5	0	0	0	0	24	4	1	0	0	0	25	4	0	0	0	0	26	3	0	0
117	2021-03-31	7	0	0	1	0	0	3	0	0	2	0	0	4	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0
118	2021-04-06	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16
119	2021-04-07	0	52	0	0	0	0	0	52	0	0	0	0	0	52	0	0	0	0	0	52	0	0	0	0	0	52	0	0
120	2021-04-08	18	0	0	0	0	0	17	0	0	1	0	0	18	0	0	0	0	0	18	0	0	0	0	0	17	0	0	0
121	2021-04-12	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	11	0	1	0	0	0	12	0	0	0
122	2021-04-13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	6	2	7	2	0	NA	NA	NA	NA
123	2021-04-13	10	0	0	1	0	0	6	0	0	0	2	0	8	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0
124	2021-04-13	1	28	0	0	0	0	1	28	0	0	0	0	1	28	0	0	0	0	1	28	0	0	0	0	1	28	0	0
125	2021-04-13	5	10	0	0	0	0	5	10	0	0	0	0	3	11	0	0	0	0	1	11	0	0	0	0	1	11	0	0
126	2021-04-14	0	8	6	0	0	27	18	8	0	15	0	0	14	10	0	17	0	0	14	10	0	2	0	0	17	11	0	0
127	2021-04-14	60	0	0	2	0	0	NA	NA	NA	NA	NA	NA	32	0	0	30	0	0	11	0	0	51	0	0	0	0	0	62
128	2021-04-14	74	0	0	2	0	0	76	0	0	0	0	0	75	0	0	1	0	0	59	0	0	16	1	0	44	0	0	32
129	2021-04-14	49	1	0	10	0	0	57	0	0	13	0	0	55	0	0	5	0	0	54	0	0	6	0	0	53	0	0	7
130	2021-04-18	34	18	0	0	0	0	38	18	1	2	0	0	31	16	1	4	0	0	24	24	0	0	4	0	24	24	0	2
131	2021-04-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
132	2021-04-19	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0
133	2021-04-19	1	4	1	0	0	0	2	4	0	0	0	0	1	5	0	0	0	0	1	5	0	0	0	0	2	4	0	0
134	2021-04-19	2	12	0	0	0	0	1	13	0	0	0	0	1	13	0	0	0	0	2	12	0	0	0	0	3	11	0	0
135	2021-04-19	14	0	0	0	0	0	14	0	1	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0
136	2021-04-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	2021-04-20	10	0	0	0	0	0	9	0	1	0	0	0	8	0	2	0	0	0	8	0	0	2	0	0	9	1	0	2
138	2021-04-21	37	36	0	0	0	0	31	41	0	1	0	0	27	44	0	2	0	0	31	42	0	0	0	0	22	51	0	0
139	2021-04-22	10	10	0	0	0	0	10	10	0	0	0	0	10	10	0	0	0	0	10	10	0	0	0	0	10	10	0	0
140	2021-04-23	0	0	0	62	0	0	9	0	0	53	0	0	0	0	0	62	0	0	0	0	0	62	0	0	0	0	0	62
141	2021-04-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	2021-04-23	7	13	0	1	0	0	11	9	0	0	0	0	10	8	0	3	0	0	9	12	0	0	0	0	7	13	0	1

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
143	2021-04-23	11	0	3	6	0	0	18	0	0	5	0	2	19	0	0	6	0	0	22	0	1	2	0	0	13	3	5	2
144	2021-04-23	18	0	0	0	0	0	12	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	14	0	0	0
145	2021-04-23	20	40	0	40	0	0	30	10	5	30	0	0	5	10	0	20	0	0	5	15	0	4	0	0	5	20	0	0
146	2021-04-23	0	0	0	8	0	0	1	0	0	7	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
147	2021-04-23	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0
148	2021-04-24	11	0	0	1	0	2	12	0	0	2	0	0	12	0	0	2	0	0	12	0	0	0	0	0	12	0	0	0
149	2021-04-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	2021-04-25	0	0	0	31	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	2021-04-25	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	2021-04-26	9	22	0	1	0	0	8	23	0	1	0	0	8	24	0	0	0	0	10	22	0	0	0	0	10	22	0	0
153	2021-04-26	0	0	0	32	0	0	0	0	0	32	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
154	2021-04-26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	2021-04-26	7	1	0	42	0	0	20	0	0	30	0	0	20	0	10	9	0	0	10	2	5	23	0	0	10	0	10	28
156	2021-04-26	0	0	0	26	0	0	0	0	3	22	0	1	0	0	1	25	0	0	0	0	0	26	0	0	0	0	0	26
157	2021-04-29	18	4	0	0	0	0	18	4	0	0	0	0	18	4	0	0	0	0	15	7	0	0	0	0	7	15	0	0
158	2021-04-29	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0
159	2021-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	2021-04-29	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0
161	2021-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	2021-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	2021-04-29	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0
164	2021-04-30	0	0	0	33	0	5	0	0	0	40	0	10	0	0	0	33	0	5	0	0	0	24	2	0	0	0	0	9
165	2021-04-30	7	0	0	0	0	0	9	0	0	0	0	0	7	0	0	0	0	0	8	0	0	0	0	0	9	0	0	0
166	2021-05-01	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0
167	2021-05-01	6	0	0	16	0	2	0	0	0	17	0	0	0	0	0	9	0	0	10	0	0	0	0	0	0	0	0	12
168	2021-05-01	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	2021-05-01	0	0	0	3	0	2	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5
172	2021-05-01	0	0	0	4	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	2021-05-02	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0
174	2021-05-02	0	0	0	4	0	3	4	0	3	0	0	0	5	1	1	1	0	0	4	1	0	0	0	0	3	0	1	3
175	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	2021-05-02	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	3	0	35	0	0	0	38
178	2021-05-02	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	17	0	0	0	0	0	0
179	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	2021-05-02	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0
181	2021-05-03	0	0	0	20	2	0	0	0	0	21	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
182	2021-05-03	1	7	0	0	0	0	1	7	0	0	0	0	1	7	0	0	0	0	1	7	0	0	0	0	0	1	0	7
183	2021-05-03	0	0	2	3	0	0	0	0	0	4	2	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0
184	2021-05-03	0	0	0	6	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
185	2021-05-04	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
186	2021-05-04	16	0	0	35	0	0	3	0	1	47	0	0	17	0	0	34	0	0	23	0	0	28	0	0	31	0	0	20
187	2021-05-04	5	0	0	15	0	0	13	0	0	8	0	0	14	0	0	7	0	0	5	0	0	0	0	0	23	0	0	12
188	2021-05-04	0	0	0	12	0	0	7	0	0	5	0	0	2	0	0	10	0	0	0	0	0	0	0	0	0	0	0	7
189	2021-05-05	0	0	0	25	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	23	0	0	1	0	14	8
190	2021-05-05	38	0	0	6	0	0	28	0	0	1	0	0	25	0	0	0	0	0	14	0	0	13	0	0	23	0	6	0
191	2021-05-06	4	16	0	0	0	0	3	16	0	0	1	0	2	18	0	0	0	0	1	19	0	0	0	0	0	20	0	0
192	2021-05-06	0	2	0	8	0	0	0	2	0	10	0	0	10	0	0	2	1	0	13	0	0	0	0	0	12	0	0	1
193	2021-05-06	0	0	0	41	0	0	0	0	0	41	0	0	1	0	2	38	0	0	2	0	1	38	0	0	2	0	1	38
194	2021-05-06	10	0	0	0	0	0	8	0	0	2	0	0	9	0	0	1	0	0	7	0	0	3	0	0	8	0	0	2
195	2021-05-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
196	2021-05-07	0	0	0	20	0	0	0	0	0	20	0	0	0	0	0	17	0	0	0	0	0	3	0	0	3	0	0	14
197	2021-05-07	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0	0	0	22	0	0	0
198	2021-05-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
199	2021-05-08	0	0	0	17	0	0	0	0	0	17	0	0	7	0	0	1	0	0	0	0	0	17	0	0	1	0	0	15
200	2021-05-08	7	0	0	1	0	0	1	0	0	6	0	0	1	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0
201	2021-05-08	24	0	0	2	0	0	9	0	2	13	0	0	7	2	3	15	0	0	9	3	4	6	0	0	0	3	2	10
202	2021-05-08	16	15	0	1	0	0	13	17	0	2	0	0	14	17	1	0	0	0	16	16	0	0	0	0	17	16	0	0
203	2021-05-08	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
204	2021-05-08	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
205	2021-05-09	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	1	1	0	0	2	0	0	0
206	2021-05-10	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
207	2021-05-10	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	2	0	0	0
208	2021-05-10	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
209	2021-05-11	10	0	0	0	0	0	11	0	0	0	0	0	9	0	2	0	0	0	11	0	0	0	0	0	10	0	0	0
210	2021-05-11	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
211	2021-05-11	35	0	0	0	0	0	35	0	0	0	0	0	35	0	0	0	0	0	48	0	0	0	0	0	47	1	0	0
212	2021-05-12	2	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	1	0
213	2021-05-12	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
214	2021-05-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
215	2021-05-13	26	0	0	4	0	0	30	0	0	0	0	0	21	0	0	7	0	0	19	0	0	10	1	0	30	0	0	0
216	2021-05-14	5	14	0	5	0	0	0	22	0	5	0	0	1	22	2	2	0	0	1	22	1	3	0	0	1	22	0	4
217	2021-05-15	22	0	1	3	0	0	26	0	0	4	0	0	26	0	0	2	1	1	30	0	0	0	0	0	29	0	0	0
218	2021-05-15	27	0	0	1	0	0	28	0	0	0	0	0	26	0	2	0	0	0	28	0	0	0	0	0	27	0	0	1
219	2021-05-16	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2
220	2021-05-16	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
221	2021-05-16	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
222	2021-05-17	7	1	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0
223	2021-05-17	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	13	0	0	0	0	0	13
224	2021-05-18	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
225	2021-05-18	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
226	2021-05-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
227	2021-05-20	3	16	0	0	0	0	0	0	0	0	0	0	3	16	0	0	0	0	3	16	0	0	0	0	3	16	0	0
228	2021-05-24	5	0	0	0	0	0	4	0	0	1	0	0	3	0	0	1	1	0	0	0	0	0	5	0	4	0	0	1
229	2021-05-28	1	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
230	2021-05-28	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
231	2021-06-04	11	9	0	1	0	0	12	8	1	0	0	0	14	7	0	0	0	0	18	4	1	0	0	0	19	3	0	0
232	2021-06-04	15	4	0	0	0	0	14	5	0	0	0	0	13	6	0	0	0	0	11	8	1	0	0	0	13	7	0	0
233	2021-06-05	5	9	0	0	0	0	5	10	0	0	0	0	6	11	0	0	0	0	6	11	0	0	0	0	6	11	0	0
234	2021-06-08	12	0	0	0	0	0	11	0	1	0	0	0	10	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0
235	2021-06-08	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
236	2021-06-09	13	9	0	0	0	0	14	8	0	0	0	0	14	8	0	0	0	0	17	10	0	0	0	0	21	6	0	0
237	2021-06-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
238	2021-08-05	10	5	0	10	0	0	NA	NA	NA	NA	NA	NA	15	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239	2021-08-19	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
240	2021-08-19	1	0	0	0	0	0	NA	NA	NA	NA	NA	NA	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0
241	2021-08-20	0	1	0	0	0	0	NA	NA	NA	NA	NA	NA	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
242	2021-08-20	0	1	0	0	0	0	NA	NA	NA	NA	NA	NA	0	0	0	1	0	0	1	0	0	0	0	0	NA	NA	NA	NA
243	2021-08-22	2	0	0	0	0	0	NA	NA	NA	NA	NA	NA	2	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0
244	2021-08-22	2	1	0	0	0	0	NA	NA	NA	NA	NA	NA	0	2	0	0	0	0	0	2	0	0	0	0	3	0	0	0
245	2021-08-24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
246	2021-09-28	14	0	0	0	0	0	12	2	0	0	0	0	12	2	0	0	0	0	12	2	0	0	0	0	NA	NA	NA	NA
247	2021-09-28	11	3	0	0	0	0	13	1	0	0	0	0	11	3	0	0	0	0	7	6	0	0	0	0	7	6	0	0
248	2021-10-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
249	2021-11-05	0	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0
250	2021-12-09	0	6	2	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0
251	2022-01-29	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	8	2	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA
252	2022-04-03	5	NA	NA	NA	NA	NA	4	NA	1	NA	NA	NA	4	NA	NA	1	NA	NA	3	NA	1	NA	NA	NA	1	NA	NA	1
253	2022-04-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
254	2022-04-08	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA
255	2022-04-08	11	3	NA	1	NA	NA	11	4	NA	NA	NA	NA	10	4	NA	1	NA	NA	10	3	NA	1	1	NA	10	5	NA	NA
256	2022-04-09	20	0	27	27	27	0	37	5	4	33	15	4	37	0	9	28	10	0	37	0	37	30	10	0	28	0	9	29
257	2022-04-09	18	NA	NA	2	NA	NA	10	NA	NA	10	NA	NA	6	NA	1	13	NA	NA	6	NA	NA	14	NA	NA	NA	NA	NA	NA
258	2022-04-09	7	0	0	7	7	0	0	0	0	7	7	0	7	0	7	0	7	0	7	1	6	0	0	0	5	2	5	0
259	2022-04-10	46	7	3	4	NA	NA	50	7	1	2	NA	NA	52	8	NA	NA	NA	NA	49	9	1	1	NA	NA	45	10	5	NA
260	2022-04-10	NA	NA	NA	30	NA	NA	27	NA	NA	3	NA	NA	20	NA	NA	8	2	NA	30	NA	NA	NA	NA	NA	24	NA	NA	6
261	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
262	2022-04-10	26	NA	NA	4	NA	NA	23	6	NA	1	NA	NA	23	7	NA	NA	NA	NA	23	7	NA	NA	NA	NA	22	7	1	NA
263	2022-04-10	16	4	NA	NA	NA	NA	16	4	NA	NA	NA	NA	14	6	NA	NA	NA	NA	14	6	NA	NA	NA	NA	11	9	NA	NA
264	2022-04-10	4	16	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	20	NA	NA
265	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
266	2022-04-11	8	20	8	2	0	0	5	25	5	2	0	0	2	28	0	0	0	0	1	29	1	0	0	0	0	30	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
267	2022-04-11	11	NA	3	NA	NA	NA	11	NA	1	1	NA	NA	14	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	12	NA	NA	2
268	2022-04-14	14	0	0	2	0	0	16	0	0	0	0	0	14	0	0	2	0	0	11	0	0	6	0	0	8	0	2	7
269	2022-04-14	27	0	0	0	0	0	25	0	0	2	0	0	22	0	1	4	0	0	26	0	0	1	0	0	0	NA	NA	NA
270	2022-04-14	27	0	0	0	0	0	24	0	1	2	0	0	26	0	1	0	0	0	22	0	0	5	0	0	24	0	0	3
271	2022-04-15	35	NA	NA	NA	NA	NA	35	NA	NA	NA	NA	NA	NA	NA	NA	35	NA	NA	35	NA	NA	NA	NA	NA	35	NA	NA	NA
272	2022-04-15	2	3	NA	NA	NA	NA	2	3	NA	NA	NA	NA	2	3	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	5
273	2022-04-16	NA	1	NA	4	NA	NA	NA	1	4	NA	NA	NA	4	1	NA	NA	NA	NA	4	1	NA	NA	NA	NA	4	1	NA	NA
274	2022-04-16	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0
275	2022-04-17	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0
276	2022-04-18	133	NA	NA	1	134	NA	134	NA	NA	NA	134	NA	132	NA	NA	2	134	NA	132	NA	NA	2	134	NA	132	NA	NA	2
277	2022-04-19	2	NA	NA	NA	NA	NA	1	1	NA	NA	NA	NA	1	1	NA	NA	NA	NA	1	1	NA	NA	NA	NA	NA	2	NA	NA
278	2022-04-19	123	NA	NA	NA	NA	NA	123	NA	NA	NA	NA	NA	103	16	NA	4	NA	NA	103	16	NA	4	NA	NA	100	16	NA	7
279	2022-04-19	15	6	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA	15	3	NA	NA	NA	NA	14	6	NA	NA
280	2022-04-19	7	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
281	2022-04-19	14	NA	NA	NA	NA	NA	12	NA	1	1	NA	NA	12	NA	2	NA	NA	NA	12	NA	NA	21	NA	NA	8	NA	NA	6
282	2022-04-20	NA	NA	NA	NA	NA	NA	1	NA	NA	8	NA	NA	3	NA	NA	6	NA	NA	7	NA	NA	2	NA	NA	9	NA	NA	NA
283	2022-04-20	60	10	14	NA	NA	NA	84	NA	NA	NA	NA	NA	42	NA	42	NA	NA	NA	40	15	24	5	NA	NA	84	NA	NA	NA
284	2022-04-20	6	NA	NA	1	NA	NA	7	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	6	NA	NA	NA	1	NA	3	NA	NA	3
285	2022-04-21	6	1	NA	NA	NA	NA	6	1	NA	3	NA	NA	7	1	NA	1	NA	NA	9	NA	NA	1	NA	NA	9	NA	1	NA
286	2022-04-21	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2
287	2022-04-21	NA	NA	NA	16	NA	NA	13	NA	NA	3	NA	NA	13	NA	NA	3	NA	NA	14	NA	NA	2	NA	NA	15	NA	NA	1
288	2022-04-21	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
289	2022-04-21	5	0	0	3	0	0	12	0	2	0	0	0	12	0	1	4	0	0	14	0	0	0	0	0	16	0	1	0
290	2022-04-22	25	22	0	4	0	0	13	28	0	6	0	0	7	33	0	3	0	0	5	26	0	6	1	0	7	13	0	5
291	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
292	2022-04-22	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
293	2022-04-22	21	NA	NA	NA	NA	NA	21	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	24	NA	NA	NA
294	2022-04-22	NA	12	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	12	NA	NA
295	2022-04-22	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA
296	2022-04-22	1	5	0	10	0	0	0	0	0	16	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
297	2022-04-22	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA
298	2022-04-22	8	0	0	3	0	0	6	0	0	4	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
299	2022-04-24	7	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	6	NA	NA	NA	1	NA	4	NA	NA	NA	3	NA	6	NA	NA	1
300	2022-04-25	9	0	9	0	0	0	9	0	9	9	0	0	0	0	9	9	9	0	0	0	9	9	9	0	0	0	9	9
301	2022-04-26	19	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
302	2022-04-26	1	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
303	2022-04-27	0	0	7	3	0	0	0	0	8	2	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10
304	2022-04-27	0	0	0	36	0	0	0	0	0	36	0	0	26	0	0	10	0	0	33	3	0	0	0	0	33	3	0	0
305	2022-04-29	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2
306	2022-04-30	22	0	0	0	0	0	20	0	0	2	0	0	21	0	0	1	0	0	21	0	0	0	1	0	16	1	0	0
307	2022-05-03	2	30	1	0	0	0	1	30	1	0	1	0	4	29	0	0	0	0	7	26	0	0	0	0	6	27	0	0
308	2022-05-04	0	0	0	2	0	0	0	0	2	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	1	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
309	2022-05-05	12	8	NA	NA	NA	NA	12	8	NA	NA	NA	NA	13	7	NA	NA	NA	NA	15	5	NA	NA	NA	NA	15	4	NA	1
310	2022-05-07	7	0	0	3	0	0	10	0	0	0	0	0	8	0	0	0	2	0	5	0	0	0	0	0	0	0	0	5
311	2022-05-12	12	NA	NA	NA	NA	NA	9	1	NA	NA	NA	NA	7	2	NA	NA	NA	NA	2	5	NA	NA	NA	NA	2	5	NA	NA
312	2022-05-15	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1
313	2022-05-19	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
314	2022-06-14	0	9	8	2	0	0	0	9	9	1	0	0	0	9	10	0	0	0	0	9	10	0	0	0	0	9	10	0
315	2022-07-31	2	8	0	0	0	0	3	7	0	0	0	0	2	8	0	0	0	0	4	6	0	0	0	0	2	8	0	0
316	2022-07-31	11	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	0	0	8	0	0	3	0	0	10	0	0	1
317	2022-07-31	2	0	0	2	0	6	0	0	0	10	0	0	10	0	0	0	0	0	10	0	0	0	0	0	7	0	0	3
318	2022-08-01	0	0	4	4	0	0	0	0	4	4	4	0	0	0	4	4	4	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
319	2022-08-01	27	3	27	27	0	0	6	0	30	30	2	1	10	0	19	19	2	4	19	0	19	0	0	0	19	0	19	3
320	2022-08-01	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
321	2022-08-01	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
322	2022-08-02	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0
323	2022-08-02	2	0	0	5	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA
324	2022-08-03	2	0	0	0	0	0	2	0	0	4	0	0	0	0	0	6	0	0	2	0	0	4	0	0	6	0	0	0
325	2022-08-04	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
326	2022-08-04	0	0	0	8	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
327	2022-08-04	0	0	0	5	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
328	2022-08-04	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
329	2022-08-04	2	0	0	1	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	NA	NA	NA	NA
330	2022-08-09	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0
331	2022-08-26	2	0	1	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0
332	2022-09-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
333	2022-09-24	1	4	0	1	1	0	3	4	0	0	0	0	2	5	0	0	0	0	1	6	0	0	0	0	1	6	0	0
334	2022-09-26	5	0	0	1	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0
335	2022-10-04	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA
336	2022-10-04	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0
337	2022-10-04	49	0	0	0	0	0	39	0	0	10	0	0	47	0	0	2	0	0	49	0	0	0	0	0	49	0	0	0
338	2022-10-07	0	0	0	25	0	0	0	0	0	25	0	0	0	0	0	25	0	0	0	0	0	25	0	0	NA	NA	NA	NA
339	2022-10-08	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	NA	NA	NA	NA
340	2022-10-15	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50
341	2022-10-21	1	0	59	59	0	0	0	0	60	60	0	0	50	0	10	10	0	0	0	0	60	0	0	0	60	0	60	0
342	2022-10-30	0	0	60	0	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0	0	0	40	0	0	0	0	0	20
343	2022-11-02	19	0	0	7	0	0	12	0	0	13	0	0	0	0	0	26	0	0	26	0	0	0	0	0	26	0	0	0
344	2022-11-02	0	0	0	338	0	0	0	0	1	337	0	0	0	0	0	338	0	0	0	0	0	338	0	0	0	0	0	338
345	2022-11-10	37	0	8	6	0	0	46	0	0	5	0	0	42	0	7	2	0	0	0	0	0	17	0	0	0	0	3	22
346	2022-11-12	10	0	0	0	0	0	35	0	0	0	0	0	35	0	0	0	0	0	33	0	0	2	0	0	0	0	0	0
347	2022-11-13	0	0	0	51	0	0	0	0	0	51	0	0	0	0	0	51	0	0	0	0	0	51	0	0	0	0	0	51
348	2022-11-17	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
349	2022-11-17	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	2	0	0	0
350	2022-11-17	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50	0	0	0	0	0	50
351	2022-11-18	5	0	0	0	0	0	5	0	0	0	0	0	3	0	2	0	0	0	1	0	0	4	0	0	0	0	0	5
352	2022-11-20	0	0	0	96	0	0	0	0	0	88	0	8	0	0	2	90	0	4	0	0	0	96	0	0	0	0	0	96

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
353	2022-11-23	25	4	0	0	0	0	21	4	0	0	4	0	0	0	0	29	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
354	2022-11-26	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
355	2023-03-30	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
356	2023-03-31	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0	0	0	0	55	1	0	0	0	0	56	0	0
357	2023-04-01	12	0	0	18	0	0	8	0	0	28	0	0	10	0	0	26	0	0	15	0	0	21	0	0	18	0	0	32
358	2023-04-01	5	0	0	2	0	0	3	0	0	3	0	0	0	0	0	6	0	0	0	0	0	0	0	0	NA	NA	NA	NA
359	2023-04-01	0	45	0	5	0	0	0	40	2	8	0	0	0	48	0	2	0	0	0	46	4	0	0	0	0	30	10	10
360	2023-04-03	0	0	0	30	30	0	0	0	0	30	30	0	0	0	0	30	30	0	30	0	30	0	0	0	0	0	0	30
361	2023-04-04	6	0	0	33	1	0	2	0	0	28	0	0	0	0	0	30	0	0	0	0	0	0	0	30	0	0	0	0
362	2023-04-05	35	0	5	16	0	0	50	0	0	4	2	0	50	3	2	1	0	0	53	3	0	0	0	0	31	0	5	20
363	2023-03-30	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0
364	2023-04-08	0	10	0	10	30	0	0	0	0	0	0	50	0	0	0	0	0	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
365	2023-04-07	0	0	0	30	0	0	0	0	0	28	2	0	0	0	0	30	0	0	0	0	0	30	0	0	0	0	3	27
366	2023-04-14	0	0	0	93	0	0	0	0	0	93	0	0	0	0	0	93	0	0	0	0	0	76	0	0	0	0	0	38
367	2023-04-12	0	0	0	34	0	0	0	0	0	34	0	0	0	0	0	0	0	34	0	0	0	34	0	0	0	0	0	34
368	2023-04-10	5	0	0	0	0	0	5	0	0	0	0	0	4	0	1	0	0	0	2	0	0	3	0	0	3	0	0	2
369	2023-04-15	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18
370	2023-04-15	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18
371	2023-04-14	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47
372	2023-04-14	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
373	2023-04-14	4	6	0	0	0	0	0	4	6	0	0	0	1	2	5	2	0	0	NA	NA	NA	NA	NA	NA	4	3	2	1
374	2023-04-15	4	0	0	0	0	0	1	0	3	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	4	0	0	0
375	2023-04-12	4	76	0	0	0	0	0	79	1	0	0	0	1	79	0	0	0	0	2	78	0	0	0	0	1	79	0	0
376	2023-04-09	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10
377	2023-04-10	3	0	0	0	0	0	3	0	0	0	0	0	2	0	0	1	0	0	3	0	0	0	0	0	3	0	0	0
378	2023-04-10	41	0	0	11	0	0	37	0	0	12	0	0	42	0	0	3	0	0	38	0	0	4	0	0	40	0	0	2
379	2023-04-11	38	2	0	8	0	0	34	2	11	1	0	0	24	13	8	3	0	0	28	18	1	1	0	0	22	20	6	0
380	2023-04-11	0	48	0	0	0	0	0	48	0	0	0	0	0	20	0	0	28	0	8	37	3	0	0	0	1	46	1	0
381	2023-04-14	0	0	1	19	0	0	10	0	4	5	0	0	4	0	1	4	0	0	0	0	0	8	0	0	0	0	0	4
382	2023-04-14	13	0	0	0	1	0	13	1	0	0	0	0	13	1	0	0	0	0	12	1	0	1	0	0	11	1	0	0
383	2023-04-14	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
384	2023-04-15	0	0	0	8	0	0	0	0	0	8	0	0	0	0	0	18	0	0	0	0	0	8	0	0	0	0	0	8
385	2023-04-16	1	0	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	1	0	1	0	0	0	2	0	0	0
386	2023-04-16	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
387	2023-04-18	92	0	0	10	0	0	90	0	0	12	0	0	89	0	0	13	0	0	87	0	0	15	0	0	98	0	0	4
388	2023-04-17	0	0	0	30	1	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
389	2023-04-19	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	2	0
390	2023-04-19	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0
391	2023-04-30	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	2

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
392	2023-05-23	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2
393	2023-06-21	0	2	2	0	0	0	0	3	1	0	0	0	0	3	1	0	0	0	1	3	0	0	0	0	0	4	0	0
394	2023-10-24	11	0	0	0	0	0	9	0	2	0	0	0	10	0	1	0	0	0	8	0	4	2	0	0	14	0	1	0
395	2023-10-22	0	0	7	0	0	0	0	0	5	2	0	0	6	0	0	0	0	0	0	1	5	0	1	0	0	1	6	0
396	2023-10-24	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0
397	2023-10-27	13	0	0	0	0	0	12	0	0	0	0	0	3	0	0	3	0	0	5	0	0	0	0	0	1	0	0	2
398	2023-10-27	7	13	0	0	0	0	3	17	0	0	0	0	2	18	0	0	0	0	3	16	1	0	0	0	2	18	0	0
399	2023-10-27	0	2	0	23	0	0	18	2	5	0	0	0	21	4	0	0	0	0	14	11	0	0	0	0	14	11	0	0
400	2023-10-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
401	2023-10-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
402	2023-10-31	19	0	0	0	0	0	19	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
403	2023-11-02	0	0	0	13	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
404	2023-11-02	0	3	0	1	0	0	0	3	0	1	0	0	0	3	0	1	0	0	0	0	0	4	0	0	NA	NA	NA	NA
405	2023-10-29	0	0	1	5	0	0	6	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
406	2023-11-07	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	100
407	2023-11-06	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
408	2023-11-09	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0
409	2023-11-12	0	0	0	25	0	1	0	0	0	26	0	0	0	0	3	23	0	0	0	0	0	26	0	0	NA	NA	NA	NA
410	2023-11-08	15	0	15	3	0	0	15	0	15	4	0	0	15	0	15	1	0	0	15	0	15	6	0	0	15	0	15	2
411	2023-11-11	3	0	3	0	3	0	3	0	3	0	3	0	0	0	3	3	3	3	0	0	0	3	3	0	3	0	3	0
412	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
413	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
414	2023-11-01	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
415	2023-11-17	40	6	4	0	0	0	40	6	4	0	0	0	45	5	0	0	0	0	43	7	0	0	0	0	44	6	0	0
416	2023-11-18	20	0	3	2	0	0	25	0	0	0	0	0	5	0	3	17	0	0	25	0	0	0	0	0	25	0	0	0
417	2023-12-06	0	0	0	5	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	5	0	0	0	0	0	5
418	2023-12-06	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
419	2023-12-01	4	0	0	0	0	0	3	0	0	1	0	0	4	0	0	0	0	0	3	0	1	0	0	0	3	0	0	0
420	2023-12-08	0	0	0	13	0	0	0	0	0	13	0	0	0	0	0	13	0	0	0	0	13	0	0	0	0	0	0	13
421	2023-12-12	9	0	0	3	0	0	8	0	0	4	0	0	8	0	0	4	0	0	5	0	0	7	0	0	0	0	0	12
422	2023-12-16	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
423	2023-12-17	43	0	43	0	0	0	43	0	43	0	0	0	43	0	43	0	0	0	43	0	43	0	0	0	43	0	43	0
424	2023-12-18	187	0	187	0	0	0	187	0	187	0	0	0	187	0	187	0	0	0	187	0	187	0	0	0	187	0	187	0
425	2024-01-01	60	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0
426	2024-01-02	30	12	0	2	0	0	32	12	0	0	0	0	32	12	0	0	0	0	32	12	0	0	0	0	32	12	0	0
427	2024-01-04	2	0	0	23	0	0	0	0	0	25	0	0	25	0	0	0	0	0	25	0	0	0	0	0	25	0	0	0
428	2024-01-06	25	0	0	0	0	2	23	0	2	0	0	2	27	0	0	0	0	0	24	0	0	0	0	3	0	0	0	0
429	2024-01-11	0	0	0	43	0	0	0	0	0	43	0	0	19	0	43	24	0	0	13	0	43	30	0	0	0	0	0	43
430	2024-02-10	14	8	4	1	0	0	19	8	0	0	0	0	13	8	2	4	0	0	19	8	0	0	0	0	12	8	2	5
431	2024-02-21	1	3	0	0	0	0	1	3	0	0	0	0	1	3	0	0	0	0	1	3	0	0	0	0	0	4	0	0
432	2024-03-09	10	2	0	0	0	0	9	2	1	0	0	0	10	2	0	0	0	0	8	2	1	1	0	0	10	2	0	0
433	2024-04-06	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
434	2024-04-06	7	0	0	2	0	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0
435	2024-04-08	45	0	0	0	0	0	25	0	0	20	0	0	20	0	25	0	0	0	0	0	0	0	0	45	15	0	0	0
436	2024-04-11	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0
437	2024-04-15	2	10	0	0	0	0	2	10	0	0	0	0	2	10	0	0	0	0	2	10	0	0	0	0	2	10	0	0
438	2024-04-16	0	11	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	0	0	11	0	0	0	0	0	9	2	0
439	2024-04-18	3	0	0	0	0	0	2	0	1	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0
440	2024-04-18	35	13	2	0	0	0	35	13	2	0	0	0	33	17	0	0	0	0	33	17	0	0	0	0	29	17	0	4
441	2024-04-19	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
442	2024-04-23	NA	NA	NA	NA	NA	NA	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
443	2024-04-22	1	0	0	1	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1
444	2024-04-22	2	4	0	0	0	0	1	4	0	1	0	0	2	4	0	0	0	0	2	4	0	0	0	0	2	4	0	0
445	2024-04-25	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	NA	NA	NA	NA	NA	2	0	0	0
446	2024-04-24	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
447	2024-04-22	124	0	0	20	0	0	112	0	0	32	0	0	80	0	0	64	0	0	43	0	0	101	0	0	3	0	0	141
448	2024-04-22	46	0	0	0	0	0	46	0	0	0	0	0	30	0	0	16	0	0	15	0	0	31	0	0	9	0	0	37
449	2024-04-23	79	4	0	10	0	0	82	3	0	0	0	0	97	6	0	2	0	0	78	7	0	0	0	0	75	6	0	0
450	2024-04-25	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2
451	2024-04-19	39	5	1	10	0	0	30	4	6	15	0	0	36	4	8	7	0	0	31	2	12	10	0	0	17	1	12	25
452	2024-04-19	5	0	0	13	0	0	3	0	0	12	0	0	2	0	0	9	0	0	0	0	0	8	0	0	0	0	0	5
453	2024-04-19	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
454	2024-05-05	41	1	0	0	0	0	41	1	0	0	0	0	37	2	0	3	0	0	37	3	0	2	0	0	32	4	3	0
455	2024-04-23	10	0	0	0	0	0	10	0	0	0	0	0	5	0	0	5	0	0	3	0	0	7	0	0	5	0	0	5
456	2024-04-23	NA	NA	NA	NA	NA	NA	0	0	0	15	0	0	0	0	5	10	0	0	0	0	2	13	0	0	15	0	0	0
457	2024-05-09	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
458	2024-05-12	8	12	2	10	0	0	8	12	0	12	0	0	5	12	0	15	0	0	3	12	0	14	0	0	3	12	0	10
459	2024-05-09	0	0	0	2	0	0	0	0	0	2	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
460	2024-05-08	15	0	6	12	0	0	15	0	0	18	0	0	15	0	4	14	0	0	16	0	0	17	0	0	18	0	0	15
461	2024-05-09	1	16	0	0	0	0	1	16	0	0	0	0	1	16	0	0	0	0	2	15	0	0	0	0	2	15	0	0
462	2024-06-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1	0	0	0	1	2	0
463	2024-07-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
464	2024-07-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	2	0	0	0	NA	NA	NA	NA
465	2024-05-09	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	40	0	0	5	0	0	15	0	0	0	0	0	0
466	2024-07-26	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0
467	2024-08-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
468	2024-09-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
469	2024-10-05	43	0	0	34	0	0	33	0	0	44	0	0	17	0	0	60	0	0	62	0	0	15	0	0	77	0	0	0
470	2024-10-15	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	0	0	0	12

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Feeding 9	Laying 9	Standing 9	Walking 9	Alert 9	Trotting 9	Feeding 12	Laying 12	Standing 12	Walking 12	Alert 12	Trotting 12	Feeding 15	Laying 15	Standing 15	Walking 15	Alert 15	Trotting 15	Feeding 18	Laying 18	Standing 18	Walking 18	Alert 18	Trotting 18	Feeding 21	Laying 21	Standing 21	Walking 21
471	2024-10-17	54	0	20	15	0	0	54	0	20	15	0	0	70	0	14	5	0	0	70	0	14	5	0	0	70	0	14	5
472	2024-10-20	0	33	0	0	0	0	0	33	0	0	0	0	0	33	0	0	0	0	0	0	0	41	41	0	0	0	0	0
473	2024-10-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
474	2024-10-27	94	0	0	0	0	0	85	0	9	0	0	0	90	0	0	4	0	0	80	0	0	14	0	0	84	0	0	10
475	2024-10-27	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100
476	2024-10-28	12	0	4	0	0	0	12	2	2	0	0	0	15	1	0	0	0	0	15	0	1	0	0	0	15	0	0	1
477	2024-10-31	5	5	0	3	0	0	8	5	0	0	0	0	8	5	0	0	0	0	6	7	0	0	0	0	5	8	0	0
478	2024-11-01	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0
479	2024-11-01	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0
480	2024-11-04	0	0	0	150	0	50	0	0	0	150	0	0	0	0	0	150	0	0	25	0	0	125	0	0	25	0	0	125
481	2024-11-05	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
482	2024-11-08	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
483	2024-11-22	76	3	0	0	0	0	79	0	0	0	0	0	79	0	0	0	0	0	79	0	0	0	0	0	0	0	0	0
484	2024-11-24	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
485	2024-11-27	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47
486	2024-11-28	14	0	0	0	0	0	0	0	0	14	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
487	2024-11-28	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
488	2024-11-28	14	11	0	0	0	0	14	11	0	0	0	0	14	11	0	0	0	0	14	11	0	0	0	0	14	11	0	0
489	2024-11-29	40	3	0	11	0	0	32	4	0	18	0	0	27	3	0	24	0	0	23	4	0	27	0	0	20	4	0	30
490	2024-10-26	1	11	3	0	0	0	2	14	0	0	0	0	2	14	0	0	0	0	0	11	0	5	0	0	3	13	0	0
491	2024-12-11	0	0	0	32	0	0	0	0	0	32	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
492	2024-12-14	1	19	0	0	0	0	2	18	0	0	0	0	3	17	0	0	0	0	3	17	0	0	0	0	3	17	0	0
493	2024-12-17	0	0	0	65	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	1
494	2024-12-23	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
1	2020-04-24	0	0	6	0	6	6	0	0	6	0	2	4	2	0	5	0	3	5	0	0	NA	NA	NA
2	2020-04-25	0	0	32	0	2	40	40	0	0	0	0	7	40	40	39	0	0	39	39	39	NA	NA	NA
3	2020-08-22	0	150	0	0	0	150	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
4	2020-08-17	0	0	0	2	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0	NA	NA	NA
5	2020-08-21	0	0	0	0	0	28	0	30	0	0	0	57	0	0	0	0	0	57	0	0	NA	Haul truck	NA
6	2020-08-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	2020-08-21	0	0	0	0	0	112	0	0	0	0	0	112	0	0	30	0	0	92	0	0	NA	NA	NA
9	2020-04-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	2020-08-12	2	5	191	0	0	20	1	0	50	15	0	144	0	3	44	4	0	160	3	1	NA	NA	NA
12	2020-08-17	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	NA	NA	NA
13	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
14	2020-08-12	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	NA	NA
15	2020-08-12	0	15	0	0	0	2	0	0	0	3	2	0	0	0	0	3	0	3	0	0	NA	Grader	NA
16	2020-08-15	0	0	1	0	1	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0	NA	NA	Tractor trailer
17	2020-05-17	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	NA	NA
18	2020-08-12	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0	NA	NA	NA
19	2020-08-15	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	NA	NA	NA
20	2020-08-12	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
21	2020-08-15	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	NA	NA	NA
22	2020-04-24	0	0	4	0	4	4	1	0	3	0	4	4	2	0	1	0	4	4	0	0	NA	NA	NA
23	2020-05-17	0	0	31	35	0	1	0	0	30	32	0	4	1	0	30	31	0	4	1	0	NA	NA	NA
24	2020-08-06	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	NA	Haul truck	Convoy
25	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
26	2020-05-18	0	0	17	15	1	1	0	0	15	11	3	2	0	0	14	14	2	2	0	0	NA	NA	NA
27	2020-05-06	0	0	0	22	0	0	0	0	0	21	1	0	0	0	0	22	0	0	0	0	Haul truck	NA	Haul truck
28	2020-08-16	0	0	2	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	NA	NA	NA
29	2020-05-03	0	0	6	2	2	0	0	0	8	2	0	0	0	0	8	2	0	0	0	0	NA	NA	NA
30	2020-04-29	1	0	15	2	3	7	2	3	10	0	3	14	0	5	6	0	2	0	1	0	NA	NA	NA
31	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
32	2020-05-04	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	NA	NA	NA
33	2020-05-02	0	0	0	0	1	7	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
34	2020-05-06	0	0	4	0	0	3	0	0	0	0	0	7	0	0	0	0	1	0	0	0	NA	NA	NA
35	2020-04-29	0	0	0	35	0	0	0	0	0	35	0	0	0	0	0	35	0	0	0	0	NA	NA	NA
36	2020-05-10	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	NA	NA	NA
37	2020-05-08	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	NA	NA	NA
38	2020-04-29	2	0	14	10	0	3	1	0	16	6	0	4	2	0	13	12	0	2	1	0	NA	NA	NA
39	2020-05-10	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	NA	NA	Haul truck
40	2020-05-09	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	NA	NA	NA
41	2020-05-12	0	0	9	0	0	1	0	0	9	0	0	1	0	0	9	0	0	0	1	0	Haul truck	NA	NA
42	2020-05-01	1	0	13	0	1	12	0	0	6	0	0	1	0	0	5	0	0	1	0	0	NA	NA	NA
43	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
44	2020-05-12	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	Haul truck	NA	NA
45	2020-05-01	0	2	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	NA	NA	NA
46	2020-05-03	0	0	0	0	0	24	0	0	0	0	1	35	0	0	0	0	0	36	0	0	NA	NA	NA
47	2020-05-01	0	0	0	0	0	12	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
48	2020-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Haul truck	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
49	2020-05-02	0	0	14	0	1	2	1	0	15	0	1	4	0	0	16	0	0	2	0	0	NA	NA	NA
50	2020-05-03	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
51	2020-04-29	2	0	3	7	0	0	2	0	5	7	0	0	0	0	4	7	0	1	0	0	NA	NA	NA
52	2020-05-09	0	0	16	2	0	0	0	0	18	2	0	0	0	0	18	2	0	0	0	0	NA	NA	NA
53	2020-05-02	NA	NA	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	NA	NA	NA
54	2020-05-07	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
55	2020-05-03	0	0	16	0	2	10	0	0	13	0	3	12	0	0	18	0	0	10	0	0	NA	NA	NA
56	2020-05-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	Haul truck	NA	NA
57	2020-05-10	0	0	~31	0	1	0	0	0	32	0	0	0	0	0	32	0	0	0	0	0	NA	NA	NA
58	2020-05-04	0	0	5	0	0	4	0	0	0	0	0	0	0	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
59	2020-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Road maintenance vehicle	NA
60	2020-05-02	0	0	3	0	0	1	0	0	4	0	0	0	0	0	3	0	1	0	0	0	NA	NA	NA
61	2020-05-04	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
62	2020-04-29	2	0	12	0	0	5	0	0	10	0	5	0	1	0	9	0	0	4	1	0	NA	NA	NA
63	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Light truck	NA	Light truck
64	2020-04-30	3	0	2	0	4	8	2	0	6	0	8	12	2	0	12	2	4	6	4	0	NA	Haul truck	NA
65	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
66	2020-04-30	2	0	16	34	2	0	0	0	12	36	0	4	2	0	14	36	0	2	0	0	NA	Light truck	NA
67	2020-04-29	6	5	13	0	0	16	4	0	4	0	0	62	7	3	12	0	0	80	5	4	NA	NA	Light truck
68	2020-08-07	3	0	25	0	75	430	2	0	50	0	100	377	6	0	4	0	4	528	1	0	NA	NA	NA
69	2020-08-06	2	0	140	52	3	3	2	0	125	32	0	41	2	0	166	20	8	6	4	0	NA	NA	NA
70	2020-05-01	0	0	3	10	2	0	0	0	4	10	1	0	0	0	3	10	2	0	0	0	NA	NA	NA
71	2020-05-06	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	NA	NA	NA
72	2020-08-06	0	0	0	0	0	25	0	1	0	0	0	10	0	0	0	0	0	2	0	0	NA	Helicopter	NA
73	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
74	2020-05-03	1	0	24	2	0	0	0	0	21	2	2	1	2	0	22	2	1	1	0	0	NA	NA	NA
75	2020-08-07	1	0	19	0	0	14	1	0	14	0	0	28	0	0	8	0	2	35	0	0	NA	NA	NA
76	2020-08-06	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2	0	0	NA	NA	NA
77	2020-08-06	0	0	61	5	2	4	0	0	40	6	1	11	0	0	15	8	1	0	2	0	NA	NA	NA
78	2020-05-12	0	0	19	0	1	1	0	0	5	0	14	2	0	0	12	0	1	9	0	0	NA	NA	NA
79	2020-05-03	0	0	7	0	1	0	0	0	5	0	0	2	0	0	7	0	0	0	0	0	NA	NA	NA
80	2020-05-04	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	NA	NA	NA
81	2020-04-30	3	0	16	0	0	86	8	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
82	2020-08-09	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
83	2020-08-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
84	2020-05-07	0	0	0	0	3	1	0	0	0	0	0	4	0	0	0	0	0	3	0	0	NA	NA	Haul truck
85	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Light truck	Light truck
86	2020-05-03	0	0	10	0	0	1	0	0	11	0	0	0	0	0	8	0	0	3	0	0	NA	NA	NA
87	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Light truck	NA
88	2020-05-03	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
89	2020-04-30	2	0	0	0	0	19	0	1	0	0	1	17	2	0	0	0	10	9	1	0	NA	NA	NA
90	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Light truck	NA
91	2020-04-30	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	NA	NA
92	2020-04-29	0	0	18	0	0	3	0	0	15	0	0	2	4	0	19	0	0	0	2	0	NA	NA	NA
93	2020-05-14	0	0	2	0	0	2	0	0	3	0	1	0	0	0	0	0	0	2	0	0	Haul truck	NA	NA
94	2020-05-06	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	NA	NA
95	2020-05-06	0	0	0	21	0	0	0	0	0	21	0	0	0	0	0	21	0	0	0	0	NA	NA	NA
96	2020-05-06	0	0	25	0	2	0	0	5	0	0	0	32	0	0	0	0	0	8	0	0	NA	NA	NA
97	2020-05-06	0	0	6	0	0	0	0	0	0	0	0	34	0	0	0	0	0	34	0	0	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
98	2020-05-02	0	2	17	0	1	18	4	0	9	7	2	9	0	1	10	6	1	25	1	0	NA	NA	NA
99	2020-05-11	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	NA	Haul truck	Haul truck
100	2020-08-06	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
101	2020-08-16	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	NA	NA	NA
102	2020-08-22	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Haul truck	NA	NA
103	2020-11-08	1	0	331	2	12	3	2	0	332	0	16	1	1	0	328	14	8	0	0	0	NA	NA	NA
104	2020-11-08	2	0	103	0	5	27	0	0	86	0	6	42	1	0	89	0	5	39	2	0	NA	NA	NA
105	2020-11-09	0	0	11	0	0	34	4	3	35	0	5	8	2	0	45	0	3	2	0	0	NA	NA	NA
106	2020-11-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
107	2020-11-19	0	0	15	0	2	22	0	0	0	0	0	29	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
108	2020-11-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
109	2020-11-13	1	0	62	8	2	65	0	3	43	6	0	24	2	0	42	8	1	19	0	0	NA	NA	NA
110	2020-11-14	0	0	23	1	1	2	0	0	21	2	1	2	1	0	22	2	2	1	0	0	NA	Light truck	NA
111	2020-11-14	0	0	160	1	1	8	0	0	165	1	0	4	0	0	157	1	0	12	0	0	NA	NA	NA
112	2020-11-14	0	0	15	0	0	0	0	0	14	0	0	0	0	0	12	2	0	0	0	0	NA	NA	NA
113	2020-11-14	1	0	0	0	0	10	1	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Fuel truck
114	2020-11-14	0	0	20	0	2	9	0	0	14	0	0	17	0	0	14	0	1	14	2	0	NA	NA	NA
115	2020-11-15	0	0	29	0	0	2	0	0	30	0	0	1	0	0	29	0	1	1	0	0	NA	NA	NA
116	2020-11-15	0	0	25	3	0	1	0	0	24	3	0	2	0	0	25	3	0	0	0	0	NA	NA	NA
117	2021-03-31	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	NA	Heavy Equipment	NA
118	2021-04-06	0	0	0	0	0	16	0	0	0	0	0	0	0	16	16	0	0	0	0	0	NA	NA	NA
119	2021-04-07	0	0	0	52	0	0	0	0	0	52	0	0	0	0	0	52	0	0	0	0	NA	NA	NA
120	2021-04-08	1	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	Light Truck	NA	NA
121	2021-04-12	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	NA	NA	NA
122	2021-04-13	NA	NA	33	1	3	20	1	0	NA	NA	NA	NA	NA	NA	18	0	1	0	0	0	NA	NA	Tanker
123	2021-04-13	0	0	7	0	0	0	0	0	6	0	0	0	0	1	5	0	0	0	0	0	NA	NA	NA
124	2021-04-13	0	0	1	28	0	0	0	0	1	28	0	0	0	0	1	28	0	0	0	0	Road Maintenance	NA	NA
125	2021-04-13	0	0	1	9	0	4	0	0	1	12	1	0	0	0	1	13	0	0	0	0	NA	NA	NA
126	2021-04-14	1	0	14	9	0	2	0	0	20	9	0	0	0	0	17	9	0	4	0	0	NA	NA	Road Maintenance
127	2021-04-14	0	0	0	0	0	62	0	0	0	0	0	62	0	0	0	0	0	62	0	0	NA	NA	NA
128	2021-04-14	0	0	34	0	0	42	0	0	21	0	0	55	0	0	10	0	0	63	3	0	NA	NA	NA
129	2021-04-14	0	0	59	0	0	1	0	0	60	0	0	0	0	0	60	0	0	0	0	0	NA	NA	NA
130	2021-04-18	2	0	26	26	0	0	0	0	24	26	1	1	0	0	20	22	0	10	0	0	NA	NA	NA
131	2021-04-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
132	2021-04-19	0	0	4	0	0	0	2	0	1	0	0	0	0	0	4	0	0	0	1	0	NA	NA	NA
133	2021-04-19	0	0	1	3	0	2	0	0	2	4	0	0	0	0	2	4	0	0	0	0	NA	NA	NA
134	2021-04-19	0	0	4	10	0	0	0	0	14	0	0	0	0	0	12	0	0	0	2	0	NA	NA	NA
135	2021-04-19	0	0	7	0	0	5	2	0	NA	NA	NA	NA	NA	NA	4	3	0	0	0	0	NA	NA	NA
136	2021-04-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Road Maintenance	NA	NA
137	2021-04-20	0	0	9	2	1	0	0	0	8	2	0	1	1	0	10	3	0	3	0	0	NA	NA	NA
138	2021-04-21	0	0	21	52	0	0	0	0	14	59	0	0	0	0	10	63	0	0	0	0	NA	NA	NA
139	2021-04-22	0	0	11	9	0	0	0	0	11	9	0	0	0	0	10	10	0	0	0	0	NA	NA	NA
140	2021-04-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
141	2021-04-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
142	2021-04-23	0	0	9	11	0	1	0	0	9	11	0	0	0	0	6	15	0	0	0	0	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
143	2021-04-23	0	0	9	10	1	0	0	0	7	10	0	3	0	0	7	12	0	1	0	0	NA	NA	NA
144	2021-04-23	0	0	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0	NA	NA	NA
145	2021-04-23	0	0	0	25	0	0	0	0	2	23	0	0	0	0	3	18	0	0	0	1	NA	NA	NA
146	2021-04-23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
147	2021-04-23	0	0	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0	0	NA	NA	NA
148	2021-04-24	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	NA	NA	NA
149	2021-04-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	Tanker	NA
150	2021-04-25	0	0	10	0	0	40	0	0	15	0	10	20	0	0	8	0	0	25	0	0	NA	NA	NA
151	2021-04-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
152	2021-04-26	0	0	9	22	0	1	0	0	6	26	0	0	0	0	7	25	0	0	0	0	NA	NA	NA
153	2021-04-26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	Light Truck; Tankers; and Snow Ploughs	NA
154	2021-04-26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
155	2021-04-26	0	0	10	15	0	6	0	0	15	1	5	6	0	0	16	2	3	5	0	0	NA	NA	NA
156	2021-04-26	0	0	0	0	0	24	4	0	0	0	0	10	0	0	0	0	0	5	0	0	NA	NA	NA
157	2021-04-29	0	0	16	6	0	0	0	0	16	6	0	0	0	0	15	7	0	0	0	0	NA	NA	NA
158	2021-04-29	0	0	17	0	0	0	0	0	17	0	0	0	0	0	17	0	0	0	0	0	NA	NA	NA
159	2021-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	Convoy
160	2021-04-29	0	0	6	0	0	0	0	0	6	0	0	0	0	0	9	0	0	1	0	0	NA	NA	Light Truck
161	2021-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	Snow Plough	NA
162	2021-04-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 tankers, 4 pickup, 1 emulsion , 2 cubes, 3 buses	NA	NA
163	2021-04-29	0	0	14	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
164	2021-04-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	Snow Plough	NA
165	2021-04-30	0	0	9	0	0	2	0	0	6	0	0	4	0	0	9	0	0	1	0	0	NA	NA	NA
166	2021-05-01	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	NA	NA	NA
167	2021-05-01	0	0	0	0	0	12	0	0	6	0	0	6	0	0	0	0	0	14	0	0	NA	NA	Snow Plough
168	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
169	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Tankers	NA	NA
170	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
171	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
172	2021-05-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
173	2021-05-02	0	0	0	16	0	0	0	0	0	16	0	0	0	0	0	16	0	0	0	0	Grader, Snow Blower, Light Truck	NA	Loader
174	2021-05-02	0	0	3	0	0	3	0	2	8	0	0	0	0	0	7	0	0	0	0	0	NA	NA	Snow Plough
175	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Convoy	NA	NA
176	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
177	2021-05-02	0	0	0	0	0	38	0	0	0	0	0	38	0	0	0	0	0	38	0	0	NA	NA	NA
178	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
179	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Convoy	NA	NA
180	2021-05-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
181	2021-05-03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	Light Truck; Heavy Equipment
182	2021-05-03	0	0	0	0	3	5	0	0	0	0	0	7	0	0	0	0	0	0	0	0	NA	Light Truck	NA
183	2021-05-03	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	NA	Light Truck; Tankers	NA
184	2021-05-03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Light Truck; Heavy Equipment	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
185	2021-05-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
186	2021-05-04	0	0	40	0	0	11	0	0	23	0	0	14	0	14	36	0	0	15	0	0	NA	NA	NA
187	2021-05-04	0	0	35	0	0	0	0	0	35	0	0	0	0	0	35	0	0	0	0	0	NA	NA	NA
188	2021-05-04	0	0	0	0	8	0	0	0	0	0	0	8	0	0	0	0	0	8	0	0	NA	NA	NA
189	2021-05-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
190	2021-05-05	1	0	14	4	0	0	0	0	0	3	2	15	0	0	16	3	0	20	0	0	NA	NA	NA
191	2021-05-06	0	0	2	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
192	2021-05-06	0	0	11	0	0	0	2	0	10	0	0	3	0	0	11	0	0	2	0	0	Heavy Equipment	NA	Heavy Equipment
193	2021-05-06	0	0	7	0	0	34	0	0	18	0	0	1	0	0	11	0	0	0	0	3	NA	NA	NA
194	2021-05-06	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
195	2021-05-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
196	2021-05-07	0	0	11	0	0	0	0	0	10	0	0	0	0	0	6	0	0	4	0	0	NA	NA	NA
197	2021-05-07	0	0	20	0	0	0	0	0	16	0	0	0	0	0	12	0	0	0	0	0	NA	NA	NA
198	2021-05-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
199	2021-05-08	1	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	Heavy Equipment
200	2021-05-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
201	2021-05-08	0	0	0	3	0	5	0	0	0	3	0	0	0	0	0	3	0	0	0	0	NA	NA	NA
202	2021-05-08	0	0	19	16	0	0	0	0	17	13	2	0	0	0	22	11	0	0	0	0	NA	Tractor	NA
203	2021-05-08	0	0	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	Heavy Equipment	NA	Heavy Equipment
204	2021-05-08	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	NA	NA
205	2021-05-09	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	1	1	1	1	1	NA	Heavy Equipment	NA
206	2021-05-10	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	NA	Heavy Equipment	NA
207	2021-05-10	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	Tanker	NA	Tanker
208	2021-05-10	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	NA	NA	NA
209	2021-05-11	1	0	11	0	0	0	0	0	10	0	0	1	0	0	11	0	0	0	0	0	NA	Fuel Truck	NA
210	2021-05-11	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	Heavy Equipment	NA	NA
211	2021-05-11	0	0	47	1	0	0	0	0	45	3	0	0	0	0	45	3	0	0	0	0	NA	NA	NA
212	2021-05-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
213	2021-05-12	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	NA	NA	NA
214	2021-05-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
215	2021-05-13	0	0	30	0	0	0	0	0	30	0	0	0	0	0	24	0	0	5	1	0	NA	Heavy Equipment	NA
216	2021-05-14	0	0	3	21	0	3	0	0	6	18	0	3	0	0	2	18	0	7	0	0	NA	NA	NA
217	2021-05-15	1	0	25	0	0	5	0	0	30	0	0	0	0	0	29	0	0	0	1	0	Heavy Equipment	NA	Heavy Equipment
218	2021-05-15	0	0	18	0	0	10	0	0	16	0	2	10	0	0	24	0	0	4	0	0	NA	EMR Truck	NA
219	2021-05-16	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	Light Truck	NA
220	2021-05-16	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	NA	NA	NA
221	2021-05-16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
222	2021-05-17	0	0	6	2	0	0	0	0	6	3	0	0	0	0	4	5	0	0	0	0	NA	NA	Tanker
223	2021-05-17	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
224	2021-05-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Heavy Equipment	Heavy Equipment	Heavy Equipment

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
225	2021-05-18	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	LHT	NA
226	2021-05-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
227	2021-05-20	0	0	4	15	0	0	0	0	4	15	0	0	0	0	4	15	0	0	0	0	NA	NA	NA
228	2021-05-24	0	0	3	0	0	0	2	0	3	0	0	2	0	0	3	0	0	2	0	0	NA	NA	NA
229	2021-05-28	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	NA	NA
230	2021-05-28	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	Blast	NA	NA
231	2021-06-04	0	0	18	3	0	0	0	0	18	5	1	0	0	0	17	5	1	0	0	0	NA	NA	NA
232	2021-06-04	0	0	10	8	0	1	0	0	12	8	0	0	0	0	12	9	0	0	0	0	Blast	NA	NA
233	2021-06-05	0	0	6	11	0	0	0	0	16	11	0	0	0	0	16	11	0	0	0	0	NA	NA	NA
234	2021-06-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
235	2021-06-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
236	2021-06-09	0	0	19	8	0	0	0	0	18	9	0	0	0	0	18	9	0	0	0	0	NA	NA	NA
237	2021-06-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Light Truck	NA	NA
238	2021-08-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
239	2021-08-19	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	NA	NA	NA
240	2021-08-19	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	NA	NA	NA
241	2021-08-20	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
242	2021-08-20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	1	0	0	0	0	NA	NA	NA
243	2021-08-22	0	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	NA	NA	NA
244	2021-08-22	0	0	3	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	Blast	NA	NA
245	2021-08-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
246	2021-09-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
247	2021-09-28	0	0	6	7	0	0	0	0	7	6	0	0	0	0	6	8	0	0	0	0	NA	NA	NA
248	2021-10-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
249	2021-11-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
250	2021-12-09	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	5	1	0	0	0	NA	NA	NA
251	2022-01-29	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	Heavy Equipment	NA
252	2022-04-03	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
253	2022-04-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Blast	NA	NA
254	2022-04-08	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment
255	2022-04-08	NA	NA	9	6	NA	NA	NA	NA	9	6	NA	NA	NA	NA	5	10	NA	NA	NA	NA	NA	NA	Blast
256	2022-04-09	0	0	0	0	0	12	0	0	30	5	22	10	5	0	5	0	5	29	5	0	NA	NA	NA
257	2022-04-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	Heavy Equipment
258	2022-04-09	0	0	7	0	7	1	0	0	7	0	7	0	0	0	7	0	7	2	0	0	NA	Light Truck	NA
259	2022-04-10	NA	NA	38	17	2	3	NA	NA	39	18	1	NA	2	NA	38	20	1	1	NA	NA	NA	NA	NA
260	2022-04-10	NA	NA	29	NA	NA	1	NA	NA	30	NA	NA	NA	NA	NA	29	NA	NA	1	NA	NA	NA	Maintenance Vehicle	NA
261	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Light Truck	NA	NA
262	2022-04-10	NA	NA	22	7	NA	1	NA	NA	20	7	NA	3	NA	NA	18	7	NA	5	NA	NA	NA	NA	NA
263	2022-04-10	NA	NA	14	6	NA	NA	NA	NA	15	4	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
264	2022-04-10	NA	NA	NA	20	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA
265	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
266	2022-04-11	0	0	0	30	0	0	0	0	1	29	1	0	0	0	0	30	0	0	0	0	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
267	2022-04-11	NA	NA	7	NA	NA	7	NA	NA	4	NA	NA	7	3	NA	4	NA	NA	9	1	NA	Maintenance Vehicle	NA	NA
268	2022-04-14	0	0	6	0	0	10	0	0	16	0	0	1	0	0	14	0	0	3	0	0	NA	NA	NA
269	2022-04-14	NA	NA	0	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA
270	2022-04-14	0	0	5	0	0	22	0	0	3	0	0	24	0	0	2	0	0	25	0	0	NA	NA	NA
271	2022-04-15	NA	NA	35	NA	NA	NA	NA	NA	35	NA	NA	NA	NA	NA	20	NA	NA	15	NA	NA	NA	NA	NA
272	2022-04-15	NA	NA	4	NA	1	NA	NA	NA	3	NA	2	5	NA	NA	5	NA	6	NA	NA	NA	NA	NA	NA
273	2022-04-16	NA	NA	4	1	NA	NA	NA	NA	4	1	NA	NA	NA	NA	3	1	NA	1	NA	NA	NA	NA	Convoy
274	2022-04-16	0	0	0	0	0	0	14	0	0	5	0	9	0	0	0	5	0	9	0	0	NA	NA	NA
275	2022-04-17	0	0	12	0	0	0	0	0	12	0	0	0	0	0	11	0	1	0	0	0	NA	NA	NA
276	2022-04-18	134	NA	134	NA	NA	NA	NA	NA	134	NA	NA	NA	NA	NA	134	NA	NA	NA	NA	NA	NA	NA	NA
277	2022-04-19	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	Heavy Equipment	Heavy Equipment	Light Truck
278	2022-04-19	NA	NA	113	NA	10	NA	NA	NA	123	NA	NA	NA	NA	NA	63	NA	60	NA	NA	NA	NA	NA	NA
279	2022-04-19	NA	NA	14	4	NA	NA	NA	NA	15	2	NA	NA	NA	NA	15	NA	NA	2	NA	NA	NA	NA	NA
280	2022-04-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
281	2022-04-19	NA	NA	10	NA	NA	4	NA	NA	13	NA	NA	1	NA	NA	12	NA	1	1	NA	NA	NA	NA	NA
282	2022-04-20	NA	NA	9	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	Heavy Equipment	NA	NA
283	2022-04-20	NA	NA	24	NA	60	NA	NA	NA	34	NA	50	NA	NA	NA	84	NA	NA	NA	NA	NA	NA	NA	NA
284	2022-04-20	NA	NA	3	NA	NA	4	NA	NA	7	NA	NA	NA	NA	NA	5	NA	NA	2	NA	NA	NA	NA	NA
285	2022-04-21	NA	NA	5	NA	NA	6	NA	NA	3	NA	NA	7	NA	NA	4	NA	NA	6	NA	NA	NA	NA	NA
286	2022-04-21	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA
287	2022-04-21	NA	NA	15	NA	NA	NA	1	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Convoy
288	2022-04-21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
289	2022-04-21	0	0	16	0	1	0	0	0	12	0	0	0	0	0	17	4	0	0	0	0	NA	Light Truck	NA
290	2022-04-22	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
291	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
292	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
293	2022-04-22	NA	NA	24	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	Convoy	Convoy
294	2022-04-22	NA	NA	NA	12	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA
295	2022-04-22	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA
296	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
297	2022-04-22	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	Convoy	NA	NA
298	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
299	2022-04-24	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	4	3	NA	NA	NA	7	NA	NA	NA	NA	NA	NA
300	2022-04-25	9	9	9	0	9	0	9	0	9	0	9	0	0	0	0	0	9	9	9	7	NA	NA	NA
301	2022-04-26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment
302	2022-04-26	2	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA
303	2022-04-27	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	10	0	0	NA	NA	NA
304	2022-04-27	0	0	32	4	0	0	0	0	36	0	0	0	0	0	36	0	0	0	0	0	NA	NA	NA
305	2022-04-29	0	0	0	0	0	2	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Light Truck	NA	NA
306	2022-04-30	5	0	21	1	0	0	0	0	21	1	0	0	0	0	16	1	0	4	1	0	NA	NA	NA
307	2022-05-03	0	0	6	27	0	0	0	0	5	27	0	1	0	0	6	27	0	0	0	0	NA	NA	NA
308	2022-05-04	0	0	0	0	1	1	0	0	1	0	1	0	0	0	2	0	0	0	0	0	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
309	2022-05-05	NA	NA	14	6	NA	NA	NA	NA	14	6	NA	NA	NA	NA	16	4	NA	NA	NA	NA	NA	NA	NA
310	2022-05-07	5	0	0	0	0	10	0	0	10	0	0	0	0	0	10	0	0	0	0	0	NA	NA	Heavy Equipment
311	2022-05-12	NA	NA	3	5	NA	NA	NA	NA	3	6	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA
312	2022-05-15	0	0	0	0	0	2	0	0	1	0	0	1	0	0	2	0	0	0	0	0	NA	NA	NA
313	2022-05-19	0	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	NA	NA	NA
314	2022-06-14	0	0	0	9	10	0	0	0	0	9	10	0	0	0	0	9	10	0	0	0	NA	NA	NA
315	2022-07-31	0	0	0	5	0	3	0	0	3	5	0	0	0	0	3	5	0	0	0	0	NA	NA	NA
316	2022-07-31	0	0	11	0	0	0	0	0	11	0	0	0	0	0	1	0	0	0	0	1	NA	NA	NA
317	2022-07-31	0	0	9	0	0	1	0	0	5	0	0	5	0	0	5	0	3	2	0	0	NA	NA	NA
318	2022-08-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
319	2022-08-01	0	1	19	0	19	19	0	0	19	1	18	18	0	0	19	0	19	18	2	1	NA	NA	NA
320	2022-08-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
321	2022-08-01	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	NA	NA	NA
322	2022-08-02	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	NA	NA	NA
323	2022-08-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Aircraft	NA	NA
324	2022-08-03	0	0	0	0	0	0	0	3	3	0	0	3	0	0	0	0	0	3	0	0	NA	NA	NA
325	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	NA
326	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
327	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
328	2022-08-04	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	NA	NA	NA
329	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
330	2022-08-09	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	Heavy Equipment	NA	NA
331	2022-08-26	0	0	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	2	0	0	NA	Heavy Equipment	NA
332	2022-09-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
333	2022-09-24	0	0	1	6	0	0	0	0	1	6	0	0	0	0	0	7	0	0	0	0	NA	Heavy Equipment	Heavy Equipment
334	2022-09-26	0	0	6	0	0	0	0	0	6	0	0	0	0	0	6	0	0	0	0	0	NA	NA	NA
335	2022-10-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	NA
336	2022-10-04	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	Light Truck	NA	NA
337	2022-10-04	0	0	47	0	0	2	0	0	43	0	0	6	0	0	45	4	0	0	0	0	NA	NA	NA
338	2022-10-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
339	2022-10-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
340	2022-10-15	0	0	34	0	11	5	0	0	35	0	15	0	0	0	40	0	10	0	0	0	NA	NA	NA
341	2022-10-21	0	0	60	0	60	0	0	0	60	0	60	0	0	0	60	0	60	0	0	0	NA	NA	NA
342	2022-10-30	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0	0	0	60	0	0	NA	NA	NA
343	2022-11-02	0	0	26	0	0	0	0	0	26	0	0	0	0	0	26	0	0	0	0	0	NA	NA	NA
344	2022-11-02	0	0	0	0	0	338	0	0	0	0	0	338	0	0	0	0	0	338	0	0	NA	NA	NA
345	2022-11-10	0	0	40	0	0	11	0	0	11	0	0	40	0	0	6	0	0	45	0	0	NA	NA	NA
346	2022-11-12	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	Heavy Equipment
347	2022-11-13	0	0	0	0	0	51	0	0	0	0	0	51	0	0	0	0	0	51	0	0	NA	NA	NA
348	2022-11-17	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	Heavy Equipment	Heavy Equipment
349	2022-11-17	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	Heavy Equipment	NA
350	2022-11-17	0	0	0	0	0	50	0	0	15	0	5	30	0	0	17	0	8	25	0	0	NA	NA	NA
351	2022-11-18	0	0	0	0	2	3	0	0	1	0	3	1	0	0	5	0	0	0	0	0	NA	NA	NA
352	2022-11-20	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
353	2022-11-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment
354	2022-11-26	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	Heavy Equipment	Heavy Equipment	Heavy Equipment
355	2023-03-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
356	2023-03-31	0	0	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0	0	0	NA	NA	NA
357	2023-04-01	0	0	24	0	0	26	0	0	12	0	0	38	0	0	25	0	0	25	0	0	NA	NA	NA
358	2023-04-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
359	2023-04-01	0	0	0	40	10	0	0	0	0	35	5	10	0	0	0	40	5	5	0	0	NA	NA	NA
360	2023-04-03	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
361	2023-04-04	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
362	2023-04-05	0	0	45	0	4	7	0	0	50	0	6	0	0	0	54	0	0	2	0	0	NA	NA	NA
363	2023-03-30	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	NA	Heavy Equipment	NA
364	2023-04-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
365	2023-04-07	0	0	0	0	1	29	0	0	0	0	0	30	0	0	0	0	0	30	0	0	NA	NA	Light Truck
366	2023-04-14	0	0	0	0	0	21	0	0	0	0	0	36	0	0	0	0	0	69	0	0	NA	NA	NA
367	2023-04-12	0	0	0	0	0	34	0	0	0	0	0	34	0	0	0	0	0	0	0	0	NA	NA	NA
368	2023-04-10	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	NA	NA	NA
369	2023-04-15	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	NA	NA	NA
370	2023-04-15	0	0	0	0	0	18	0	0	0	0	0	18	0	0	0	0	0	18	0	0	NA	NA	NA
371	2023-04-14	0	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0	NA	NA	NA
372	2023-04-14	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	NA	NA	NA
373	2023-04-14	0	0	4	6	0	0	0	0	2	0	0	8	0	0	0	0	0	10	0	0	NA	NA	NA
374	2023-04-15	0	0	2	0	2	0	0	0	0	0	4	0	0	0	0	0	3	1	0	0	NA	NA	NA
375	2023-04-12	0	0	1	79	0	0	0	0	1	79	0	0	0	0	1	79	0	0	0	0	NA	NA	NA
376	2023-04-09	0	0	0	0	0	8	0	2	0	0	0	10	0	0	0	0	0	10	0	0	NA	NA	NA
377	2023-04-10	0	0	2	0	0	1	0	0	2	0	0	0	1	0	0	0	0	3	0	0	NA	NA	NA
378	2023-04-10	0	0	37	1	0	4	0	0	35	0	0	5	0	0	36	0	0	1	0	0	NA	NA	NA
379	2023-04-11	0	0	17	22	0	9	0	0	20	27	0	1	0	0	20	27	0	1	0	0	NA	NA	NA
380	2023-04-11	0	0	0	48	0	0	0	0	0	48	0	0	0	0	0	48	0	0	0	0	NA	NA	NA
381	2023-04-14	1	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
382	2023-04-14	0	0	10	1	0	0	0	0	7	1	2	0	0	0	7	2	0	0	0	0	NA	NA	NA
383	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
384	2023-04-15	0	0	0	0	0	8	0	0	0	0	0	8	0	0	0	0	0	8	0	0	NA	NA	NA
385	2023-04-16	0	0	1	0	0	1	0	0	0	0	0	2	0	0	2	0	0	0	0	0	NA	NA	NA
386	2023-04-16	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	NA	NA	NA
387	2023-04-18	0	0	67	0	0	0	9	26	82	0	0	10	0	0	72	0	0	20	0	0	NA	NA	NA
388	2023-04-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
389	2023-04-19	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	NA	NA	NA
390	2023-04-19	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	NA	NA	NA
391	2023-04-30	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	NA	Light Truck	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
392	2023-05-23	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	NA	NA	NA
393	2023-06-21	0	0	0	4	0	0	0	0	0	4	0	0	0	0	2	2	0	0	0	0	NA	Aircraft	NA
394	2023-10-24	0	0	6	0	0	9	0	0	15	0	0	0	0	0	14	0	1	0	0	0	NA	NA	Heavy Equipment
395	2023-10-22	0	0	0	0	7	0	0	0	5	0	0	0	0	2	7	0	0	0	0	0	Tanker	NA	NA
396	2023-10-24	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	Heavy Equipment	NA	NA
397	2023-10-27	0	0	0	0	0	1	0	0	12	0	0	0	0	0	18	0	0	5	0	0	NA	NA	NA
398	2023-10-27	0	0	2	18	0	0	0	0	3	21	0	0	0	5	2	18	5	0	0	0	NA	NA	NA
399	2023-10-27	0	0	9	16	0	0	0	0	5	15	0	5	0	0	4	18	3	0	0	0	NA	NA	NA
400	2023-10-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Aircraft	NA	NA
401	2023-10-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
402	2023-10-31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
403	2023-11-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
404	2023-11-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
405	2023-10-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
406	2023-11-07	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	NA	NA	NA
407	2023-11-06	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	NA	NA	NA
408	2023-11-09	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	NA	NA	NA
409	2023-11-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
410	2023-11-08	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
411	2023-11-11	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	3	3	0	NA	NA	NA
412	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Aircraft	Aircraft	NA
413	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
414	2023-11-01	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Convoy	NA	Heavy Equipment
415	2023-11-17	0	0	39	6	5	0	0	0	44	6	0	0	0	0	43	7	0	0	0	0	NA	NA	NA
416	2023-11-18	0	0	23	0	2	0	0	0	25	0	0	0	0	0	20	0	1	4	0	0	NA	NA	NA
417	2023-12-06	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	NA	NA	NA
418	2023-12-06	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
419	2023-12-01	0	0	3	0	0	1	0	0	4	0	0	0	0	0	4	0	0	0	0	0	NA	NA	NA
420	2023-12-08	0	0	0	0	0	13	0	0	0	0	13	0	0	0	0	0	0	13	0	0	NA	NA	NA
421	2023-12-12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	NA	NA	NA
422	2023-12-16	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	NA	NA	NA
423	2023-12-17	0	0	43	0	43	0	0	0	43	0	43	0	0	0	43	0	43	0	0	0	NA	NA	NA
424	2023-12-18	0	0	187	0	187	0	0	0	187	0	187	0	0	0	187	0	187	0	0	0	NA	NA	NA
425	2024-01-01	0	0	60	0	0	0	0	0	60	0	0	0	0	0	60	0	0	0	0	0	NA	NA	NA
426	2024-01-02	0	0	32	12	0	0	0	0	32	12	0	0	0	0	32	12	0	0	0	0	NA	NA	NA
427	2024-01-04	0	0	0	0	0	25	0	0	0	0	0	25	0	0	25	0	0	0	0	0	NA	NA	NA
428	2024-01-06	0	0	27	0	0	0	0	0	26	0	0	1	0	0	27	0	0	0	0	0	NA	NA	Tanker
429	2024-01-11	0	0	0	0	0	43	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
430	2024-02-10	0	0	11	9	4	3	0	0	15	9	3	0	0	0	8	9	6	4	0	0	NA	NA	NA
431	2024-02-21	0	0	1	3	0	0	0	0	1	3	0	0	0	0	1	3	0	0	0	0	NA	NA	Tanker
432	2024-03-09	0	0	5	2	0	5	0	0	10	2	0	0	0	0	10	2	0	0	0	0	NA	NA	NA
433	2024-04-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
434	2024-04-06	0	0	9	0	0	0	0	0	9	0	0	0	0	0	9	0	0	0	0	0	Heavy Equipment	NA	Heavy Equipment
435	2024-04-08	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	NA	NA	NA
436	2024-04-11	0	0	0	56	0	0	0	0	0	56	0	0	0	0	0	56	0	0	0	0	NA	NA	NA
437	2024-04-15	0	0	1	11	0	0	0	0	1	11	0	0	0	0	0	12	0	0	0	0	NA	NA	Convoy
438	2024-04-16	0	0	0	7	4	0	0	0	0	5	4	2	0	0	0	0	2	9	0	0	NA	NA	NA
439	2024-04-18	0	0	0	0	0	3	0	0	2	1	0	0	0	0	1	2	0	0	0	0	NA	Light Truck	NA
440	2024-04-18	0	0	28	17	0	5	0	0	32	14	3	1	0	0	35	11	3	1	0	0	Light Truck	NA	NA
441	2024-04-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Blast	NA	NA
442	2024-04-23	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	0	NA	NA	Tanker
443	2024-04-22	0	0	1	0	0	0	1	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	NA	Tanker
444	2024-04-22	0	0	2	4	0	0	0	0	1	5	0	0	0	0	1	5	0	0	0	0	NA	NA	NA
445	2024-04-25	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	NA	NA
446	2024-04-24	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	NA	NA	NA
447	2024-04-22	0	0	0	0	0	144	0	0	0	0	0	144	0	0	0	0	0	144	0	0	NA	NA	NA
448	2024-04-22	0	0	9	0	0	37	0	0	6	0	0	40	0	0	6	0	0	40	0	0	NA	NA	NA
449	2024-04-23	0	0	87	14	0	2	0	0	76	8	0	1	0	0	87	6	0	10	0	0	NA	NA	NA
450	2024-04-25	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	NA	NA	NA
451	2024-04-19	0	0	34	1	11	9	0	0	30	0	10	15	0	0	31	0	5	19	0	0	NA	NA	NA
452	2024-04-19	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
453	2024-04-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA
454	2024-05-05	3	0	28	4	6	4	0	0	35	3	1	3	0	0	38	4	0	0	0	0	NA	NA	NA
455	2024-04-23	0	0	5	0	0	5	0	0	10	0	0	0	0	0	6	0	2	2	0	0	NA	NA	NA
456	2024-04-23	0	0	15	0	0	0	0	0	15	0	0	0	0	0	15	0	0	0	0	0	NA	NA	Convoy
457	2024-05-09	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	NA	NA
458	2024-05-12	0	0	5	12	0	5	0	0	5	12	0	2	0	0	5	12	0	2	0	0	NA	NA	NA
459	2024-05-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
460	2024-05-08	0	0	15	0	0	18	0	0	15	0	0	0	0	0	10	0	0	5	0	0	NA	NA	NA
461	2024-05-09	0	0	2	15	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
462	2024-06-25	0	0	1	2	0	0	0	0	1	2	0	0	0	0	1	2	0	0	0	0	NA	NA	NA
463	2024-07-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
464	2024-07-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	NA
465	2024-05-09	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
466	2024-07-26	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	Convoy	NA	NA
467	2024-08-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
468	2024-09-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
469	2024-10-05	0	0	63	0	0	14	0	0	77	0	0	0	0	0	77	0	0	0	0	0	NA	NA	NA
470	2024-10-15	12	0	0	0	0	12	12	0	0	0	0	12	12	12	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Alert 21	Trotting 21	Feeding 24	Laying 24	Standing 24	Walking 24	Alert 24	Trotting 24	Feeding 27	Laying 27	Standing 27	Walking 27	Alert 27	Trotting 27	Feeding 30	Laying 30	Standing 30	Walking 30	Alert 30	Trotting 30	Disturbance 0	Disturbance 3	Disturbance 6
471	2024-10-17	0	0	70	0	14	5	0	0	70	0	14	5	0	0	0	0	0	20	5	64	NA	NA	NA
472	2024-10-20	41	41	0	0	0	41	41	0	0	0	0	41	41	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
473	2024-10-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Convoy	NA
474	2024-10-27	0	0	94	0	0	0	0	0	80	0	14	0	0	0	55	0	10	29	0	0	NA	NA	NA
475	2024-10-27	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	0	0	100	0	0	NA	NA	NA
476	2024-10-28	0	0	15	0	0	1	0	0	13	0	1	2	0	0	14	0	0	0	2	0	NA	NA	NA
477	2024-10-31	0	0	4	9	0	0	0	0	4	9	0	0	0	0	4	9	0	0	0	0	NA	NA	NA
478	2024-11-01	0	0	7	0	0	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	NA	NA	NA
479	2024-11-01	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	NA	NA	NA
480	2024-11-04	0	0	0	0	0	150	0	0	0	75	0	74	0	0	0	75	0	75	0	0	NA	NA	NA
481	2024-11-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
482	2024-11-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Aircraft	NA	Aircraft
483	2024-11-22	0	79	0	0	0	0	0	79	0	0	0	0	0	78	0	0	0	0	0	77	NA	NA	NA
484	2024-11-24	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	NA	NA	NA
485	2024-11-27	0	0	0	0	0	47	0	0	0	0	0	47	0	0	0	0	0	47	0	0	NA	NA	NA
486	2024-11-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
487	2024-11-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
488	2024-11-28	0	0	13	11	0	1	0	0	13	11	1	0	0	0	11	11	3	0	0	0	NA	NA	NA
489	2024-11-29	0	0	20	4	0	30	0	0	20	3	1	30	0	0	18	4	0	32	0	0	NA	NA	NA
490	2024-10-26	0	0	0	14	2	0	0	0	0	16	0	0	0	0	0	16	0	0	0	0	NA	NA	NA
491	2024-12-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
492	2024-12-14	0	0	5	15	0	0	0	0	5	15	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
493	2024-12-17	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	5	0	0	NA	NA	NA
494	2024-12-23	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	NA	NA	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
1	2020-04-24	NA	Haul truck	NA	NA	NA	NA	NA	NA	2020	-96.00723143	64.4105711	NA
2	2020-04-25	Haul truck	NA	NA	NA	NA	Hunter	Hunter	NA	2020	-96.0993062	64.48272957	NA
3	2020-08-22	NA	NA	NA	NA	ATV	NA	NA	NA	2020	-96.16044643	64.52716304	NA
4	2020-08-17	NA	NA	NA	NA	Tractor trailer	NA	NA	NA	2020	-96.20322379	64.55866666	NA
5	2020-08-21	NA	Haul truck	Light truck	NA	NA	Hunter	NA	NA	2020	-96.20509915	64.56257264	NA
6	2020-08-22	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.27646511	64.59939621	NA
7	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.27927239	64.6014325	NA
8	2020-08-21	NA	Haul truck	NA	Haul truck	NA	NA	NA	NA	2020	-96.28023571	64.61920306	NA
9	2020-04-24	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.29140908	64.62508355	NA
10	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.37023401	64.74715234	NA
11	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.31767716	64.84207362	NA
12	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.31986083	64.8449325	NA
13	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.32588959	64.90231942	NA
14	2020-08-12	Grader	NA	NA	NA	NA	NA	NA	NA	2020	-96.31528719	64.93307095	NA
15	2020-08-12	NA	Road maintenance vehicle	NA	NA	NA	NA	NA	NA	2020	-96.31528719	64.93307095	NA
16	2020-08-15	NA	Tractor trailer	NA	Fuel tanker	NA	NA	NA	NA	2020	-96.30094309	64.93488602	NA
17	2020-05-17	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.25280608	64.94683801	NA
18	2020-08-12	Sand truck	NA	NA	NA	NA	NA	NA	NA	2020	-96.25206067	64.94811732	NA
19	2020-08-15	NA	NA	Tractor trailer	NA	NA	Light truck	NA	NA	2020	-96.25206067	64.94811732	NA
20	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.2206304	64.95810362	NA
21	2020-08-15	Fuel tank	NA	NA	NA	NA	NA	NA	NA	2020	-96.22291879	64.97976017	NA
22	2020-04-24	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.21310528	65.00739608	NA
23	2020-05-17	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.18089823	65.01809703	NA
24	2020-08-06	Convoy	Light truck	NA	NA	NA	NA	NA	NA	2020	-96.06389706	65.02199437	NA
25	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.07966033	65.02624571	NA
26	2020-05-18	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.08649281	65.02904625	NA
27	2020-05-06	NA	NA	Haul truck	NA	NA	NA	NA	NA	2020	-96.01040562	65.05011137	NA
28	2020-08-16	Tractor trailer	Light truck	Tractor trailer	NA	Tractor trailer	NA	Light truck	NA	2020	-96.01040562	65.05011137	NA
29	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.00900114	65.07116076	NA
30	2020-04-29	NA	NA	NA	Light truck	NA	Light truck	NA	NA	2020	-96.02097383	65.07732683	NA
31	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.02689544	65.08243778	NA
32	2020-05-04	NA	NA	Road maintenance vehicle	Light truck	NA	Light truck	NA	NA	2020	-96.03039104	65.08297417	NA
33	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.05328981	65.0834448	NA
34	2020-05-06	NA	NA	Haul truck	NA	NA	NA	Light truck	NA	2020	-96.05770234	65.08898268	NA
35	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.06388913	65.0927412	NA
36	2020-05-10	Haul truck	NA	NA	NA	Haul truck	NA	NA	NA	2020	-96.06799208	65.09918863	NA
37	2020-05-08	NA	NA	NA	NA	NA	NA	NA	Haul truck	2020	-96.06798912	65.09921552	NA
38	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.08395033	65.10557988	NA
39	2020-05-10	NA	NA	NA	NA	Haul truck	NA	Fuel truck	Haul truck	2020	-96.09420742	65.1121372	NA
40	2020-05-09	NA	NA	Convoy	NA	Haul truck	Haul truck	NA	NA	2020	-96.10647904	65.12471336	NA
41	2020-05-12	NA	NA	Haul truck	Haul truck	NA	NA	NA	Haul truck	2020	-96.10699636	65.12485805	NA
42	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.10724988	65.12683856	NA
43	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.10827811	65.13228234	NA
44	2020-05-12	NA	NA	NA	Haul truck	NA	NA	NA	NA	2020	-96.10509953	65.14129082	NA
45	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.1050587	65.14146963	NA
46	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.11080218	65.14809992	NA
47	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.12605835	65.15404148	NA
48	2020-05-11	NA	NA	Haul truck	NA	NA	NA	NA	NA	2020	-96.1436027	65.16596065	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
49	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.14605632	65.16955437	NA
50	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.15419952	65.17925453	NA
51	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.15916298	65.18238371	NA
52	2020-05-09	NA	NA	Haul truck	NA	Haul truck	Haul truck	NA	Haul truck	2020	-96.16039694	65.18522669	NA
53	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.16431027	65.19578894	NA
54	2020-05-07	NA	Light truck	Light truck	Haul truck	NA	NA	NA	NA	2020	-96.16460921	65.19599214	NA
55	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.18043839	65.1997294	NA
56	2020-05-07	NA	NA	Haul truck	NA	NA	Haul truck	NA	NA	2020	-96.18235661	65.20059152	NA
57	2020-05-10	Light truck	NA	NA	NA	NA	NA	Haul truck	NA	2020	-96.22493447	65.21217753	NA
58	2020-05-04	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.22751929	65.21262034	NA
59	2020-05-11	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.24267863	65.21289933	NA
60	2020-05-02	NA	NA	NA	NA	NA	NA	Grader	NA	2020	-96.23361981	65.21606413	NA
61	2020-05-04	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.42625838	65.22213573	NA
62	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.44195358	65.22313093	NA
63	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.37074937	65.22280899	NA
64	2020-04-30	NA	NA	Light truck	Light truck	NA	NA	NA	Tractor trailer	2020	-96.25176861	65.22156922	NA
65	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.2551831	65.22248465	NA
66	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.39575357	65.22618031	NA
67	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.26412485	65.22479372	NA
68	2020-08-07	NA	NA	Light truck	NA	Light truck	NA	NA	NA	2020	-96.46680172	65.23246714	NA
69	2020-08-06	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.4686246	65.23645723	NA
70	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.4751075	65.24053458	NA
71	2020-05-06	NA	NA	Light truck	NA	NA	NA	NA	NA	2020	-96.47505875	65.24059661	NA
72	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.4044764	65.27556017	NA
73	2020-05-02	Convoy	NA	NA	NA	NA	NA	NA	NA	2020	-96.4088991	65.28358227	NA
74	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.41274605	65.28547104	NA
75	2020-08-07	NA	NA	NA	NA	NA	NA	Helicopter	NA	2020	-96.40884065	65.28592463	NA
76	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.4139015	65.29315843	NA
77	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.4139015	65.29315843	NA
78	2020-05-12	NA	NA	NA	NA	NA	NA	NA	Haul truck	2020	-96.41343543	65.29659813	NA
79	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.41271538	65.29737586	NA
80	2020-05-04	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.41187251	65.30093479	NA
81	2020-04-30	Bus	Bus	NA	Light truck	Haul truck	NA	NA	NA	2020	-96.41221885	65.30462187	NA
82	2020-08-09	NA	NA	NA	NA	Fuel truck	NA	NA	NA	2020	-96.41204038	65.30469064	NA
83	2020-08-07	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.41414867	65.3090185	NA
84	2020-05-07	NA	NA	NA	NA	NA	Haul truck	NA	NA	2020	-96.41452016	65.30960847	NA
85	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.42973108	65.31741944	NA
86	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.43961511	65.31957186	NA
87	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.44407771	65.32138937	NA
88	2020-05-03	NA	NA	NA	Grader	NA	NA	NA	NA	2020	-96.52082142	65.33207085	NA
89	2020-04-30	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.5151989	65.33245414	NA
90	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.60162803	65.36886571	NA
91	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.60221026	65.37899257	NA
92	2020-04-29	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.60225264	65.37923564	NA
93	2020-05-14	Haul truck	NA	NA	NA	NA	NA	NA	NA	2020	-96.60648773	65.39299342	NA
94	2020-05-06	NA	NA	NA	Light truck	NA	NA	NA	NA	2020	-96.60751064	65.39358418	NA
95	2020-05-06	NA	NA	NA	Light truck	NA	NA	NA	NA	2020	-96.60751064	65.39358418	NA
96	2020-05-06	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.61276259	65.39669264	NA
97	2020-05-06	NA	NA	NA	Light truck	NA	NA	NA	Haul truck	2020	-96.61276259	65.39669264	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
98	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.61301904	65.39671465	NA
99	2020-05-11	NA	NA	NA	NA	NA	NA	Light truck	NA	2020	-96.622495	65.40147841	NA
100	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	2020	NA	NA	NA
101	2020-08-16	NA	Light truck	Light truck	NA	Tractor trailer	NA	NA	NA	2020	NA	NA	NA
102	2020-08-22	NA	NA	NA	NA	NA	NA	NA	NA	2020	NA	NA	NA
103	2020-11-08	NA	Fuel truck	NA	NA	NA	NA	NA	NA	2020	-96.3467406	64.71835024	NA
104	2020-11-08	Fuel truck	NA	NA	NA	NA	NA	NA	NA	2020	-96.3662713	64.75330452	NA
105	2020-11-09	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.34612707	64.72503777	NA
106	2020-11-18	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.30596246	64.91737753	NA
107	2020-11-19	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.3456142	64.78272907	NA
108	2020-11-12	NA	predator	NA	NA	NA	NA	NA	NA	2020	-96.33971636	64.89464756	NA
109	2020-11-13	NA	NA	NA	NA	Tractor trailer	NA	NA	NA	2020	-96.34178312	64.72157469	NA
110	2020-11-14	NA	NA	Fuel truck	Fuel truck	NA	NA	NA	NA	2020	-96.37004707	64.66561828	NA
111	2020-11-14	NA	NA	NA	NA	ATV	NA	NA	NA	2020	-96.35880884	64.71281929	NA
112	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.30772426	64.64672618	NA
113	2020-11-14	NA	NA	ATV	NA	NA	NA	NA	NA	2020	-96.37347168	64.68112333	NA
114	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.35056324	64.72585349	NA
115	2020-11-15	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.32479571	64.87191417	NA
116	2020-11-15	NA	NA	NA	NA	NA	NA	NA	NA	2020	-96.37106852	64.67173331	NA
117	2021-03-31	NA	Heavy Equipment	Light Truck	Heavy Equipment	Heavy Equipment	NA	NA	NA	2021	-96.064764	65.093211	NA
118	2021-04-06	NA	NA	NA	NA	NA	NA	Light Truck	NA	2021	-96.32148307	64.8467909	NA
119	2021-04-07	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.17609075	65.02428539	NA
120	2021-04-08	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.11083026	65.04880556	NA
121	2021-04-12	NA	Heavy Equipment	Road Maintenance	NA	Road Maintenance	Road Maintenance	NA	NA	2021	-96.16279707	65.02991386	NA
122	2021-04-13	Tractor	NA	NA	NA	Tanker	NA	NA	NA	2021	-96.3730869	64.70606	NA
123	2021-04-13	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.312035	64.930602	NA
124	2021-04-13	NA	NA	NA	NA	NA	Heavy Equipment	NA	NA	2021	-96.3601339	64.731372	NA
125	2021-04-13	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.261434	64.93886	NA
126	2021-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.1808899	65.018097	NA
127	2021-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.222082	64.975014	NA
128	2021-04-14	NA	NA	NA	Tanker	Light Truck	NA	NA	NA	2021	-96.303521	64.641705	NA
129	2021-04-14	NA	NA	NA	Light Truck	NA	NA	NA	NA	2021	-96.32384	64.853863	NA
130	2021-04-18	NA	NA	NA	convoy	NA	NA	NA	NA	2021	-96.300696	64.634772	NA
131	2021-04-18	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.300696	64.634772	NA
132	2021-04-19	NA	Light Trucks; Tankers; Convoy	NA	NA	NA	NA	NA	NA	2021	-96.37543903	64.70400926	NA
133	2021-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.36293653	64.71110008	NA
134	2021-04-19	NA	NA	Roll-Off Truck	NA	NA	NA	Roll-Off Truck	NA	2021	-96.10072181	65.04659942	NA
135	2021-04-19	NA	NA	NA	NA	Road Maintenance	NA	NA	NA	2021	-96.10074353	65.04659449	NA
136	2021-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.10069366	65.04665451	NA
137	2021-04-20	NA	NA	Light Truck; Road Maintenance	NA	NA	NA	Snow plough	NA	2021	-96.08501667	65.02731667	NA
138	2021-04-21	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.28072555	64.61819603	NA
139	2021-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.22428724	64.95717939	NA
140	2021-04-23	NA	Light Truck	NA	NA	NA	Light Truck	NA	NA	2021	-96.24176363	64.57276595	NA
141	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.244259	64.573856	NA
142	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.27193538	64.5857828	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
143	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.02736657	64.41046515	NA
144	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.33139272	64.65627825	NA
145	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.16137551	64.52384334	NA
146	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.35769918	64.76064987	NA
147	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.32889852	64.8743981	NA
148	2021-04-24	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.3279436	64.81093547	NA
149	2021-04-24	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.3279436	64.81093547	NA
150	2021-04-25	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.16133185	64.5215141	NA
151	2021-04-25	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.32747057	64.81812398	NA
152	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.29392617	64.62688697	NA
153	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.29393467	64.62684512	NA
154	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.29390417	64.62685515	NA
155	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.36593797	64.74498658	NA
156	2021-04-26	NA	NA	NA	NA	NA	Snow Plough	NA	NA	2021	-96.3420361	64.88450478	NA
157	2021-04-29	NA	NA	Light Truck	NA	NA	NA	NA	NA	2021	-96.0668	65.09566667	NA
158	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.06705	65.09586667	NA
159	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.06705	65.09586667	NA
160	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.06706667	65.09588333	NA
161	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.13151667	65.15875	NA
162	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.13151667	65.15875	NA
163	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.13151667	65.15875	NA
164	2021-04-30	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.2150488	65.00686005	NA
165	2021-04-30	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.6219049	65.400857	NA
166	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.14066079	65.0565147	NA
167	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.14069594	65.05654176	NA
168	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.06186667	64.44618333	NA
169	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.18205443	65.03578425	NA
170	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.1598356	65.0314995	NA
171	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.09928333	64.48261667	NA
172	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.09928333	64.48261667	NA
173	2021-05-02	NA	Light Truck	NA	Light Truck	NA	NA	Fuel Truck	NA	2021	-96.08194987	65.03001163	NA
174	2021-05-02	Fuel Truck	NA	NA	NA	NA	NA	NA	NA	2021	-96.08196854	65.0300298	NA
175	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.12904028	65.05358363	NA
176	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.12897273	65.05355153	NA
177	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.08186667	64.45973333	NA
178	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.12526603	64.50197795	NA
179	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.14292502	64.51103665	NA
180	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.14004968	64.50951526	NA
181	2021-05-03	Snow Plough	NA	NA	NA	NA	NA	NA	NA	2021	-96.07144425	65.02306537	NA
182	2021-05-03	NA	NA	NA	NA	Snow Plough	NA	NA	NA	2021	-96.326808	64.820318	NA
183	2021-05-03	NA	NA	Loader	NA	NA	NA	NA	NA	2021	-96.418353	65.227863	NA
184	2021-05-03	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.42545428	65.22329633	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
185	2021-05-04	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.66682869	65.401491	NA
186	2021-05-04	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.12298266	64.4981587	NA
187	2021-05-04	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.412072	65.30324	NA
188	2021-05-04	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.14245646	64.51078707	NA
189	2021-05-05	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.08011705	64.45453109	NA
190	2021-05-05	NA	NA	NA	Light Truck	NA	NA	NA	NA	2021	-96.6219049	65.400857	NA
191	2021-05-06	NA	NA	NA	Light Truck; Heavy Equipment	NA	NA	NA	NA	2021	-96.64471081	65.40512733	NA
192	2021-05-06	Heavy Equipment	NA	Heavy Equipment	NA	Heavy Equipment	NA	Heavy Equipment	NA	2021	-96.64470832	65.40514461	NA
193	2021-05-06	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.240467	64.568749	NA
194	2021-05-06	NA	NA	Grader	NA	NA	NA	NA	NA	2021	-96.26200125	64.58060255	NA
195	2021-05-07	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.00068802	64.36405054	NA
196	2021-05-07	NA	NA	NA	NA	Fuel Truck	NA	NA	NA	2021	-96.303521	64.641705	NA
197	2021-05-07	NA	NA	NA	NA	NA	NA	Fuel Truck	NA	2021	-96.370585	64.74953	NA
198	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.06330884	64.44662525	NA
199	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.20318167	64.55877383	NA
200	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.37485345	64.6843656	NA
201	2021-05-08	NA	NA	Heavy Equipment; Light Truck	NA	Heavy Equipment	NA	Heavy Equipment	NA	2021	-96.07312221	65.02214847	NA
202	2021-05-08	Tractor	NA	Tractor	Light Truck; Tractor	NA	Tractor	Tractor	NA	2021	-96.097145	65.114773	NA
203	2021-05-08	NA	Heavy Equipment	NA	NA	Heavy Equipment	NA	Heavy Equipment	NA	2021	-96.09724552	65.11500959	NA
204	2021-05-08	Light Truck	NA	NA	NA	NA	NA	NA	NA	2021	-96.32641389	64.82105846	NA
205	2021-05-09	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.3246138	64.81542334	NA
206	2021-05-10	Light Truck	NA	NA	NA	NA	NA	NA	NA	2021	-96.10064298	65.0480309	NA
207	2021-05-10	Tanker	Tanker	NA	NA	NA	NA	NA	NA	2021	-96.14631788	65.05094301	NA
208	2021-05-10	Tanker	NA	NA	NA	NA	NA	NA	NA	2021	-96.30086485	64.93489743	NA
209	2021-05-11	NA	NA	NA	Roll-Off Truck	NA	NA	NA	NA	2021	-96.08598727	65.02919838	NA
210	2021-05-11	Heavy Equipment; Light Truck	Heavy Equipment	Heavy Equipment	Heavy Equipment	Heavy Equipment	NA	Heavy Equipment	NA	2021	-96.10672778	65.1247756	NA
211	2021-05-11	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.14636575	65.04910146	NA
212	2021-05-12	NA	NA	NA	Light Truck	NA	Tanker	NA	NA	2021	-96.1464242	65.05107583	NA
213	2021-05-12	NA	NA	NA	Road Maintenance	NA	NA	NA	NA	2021	-96.35770523	64.66016617	NA
214	2021-05-12	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.22428662	64.98318423	NA
215	2021-05-13	Light Truck	NA	NA	Qty 1; 12 caribou move 10 m away from the road.	NA	NA	Heavy Equipment	NA	2021	-96.00216888	65.05112289	NA
216	2021-05-14	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.313357	64.65243	NA
217	2021-05-15	NA	NA	Heavy Equipment	Heavy Equipment; Light Truck	NA	Heavy Equipment; Light Truck	NA	Heavy Equipment	2021	-96.16468923	65.19422718	NA
218	2021-05-15	NA	NA	Tanker	NA	NA	NA	NA	NA	2021	-96.087731	65.034125	NA
219	2021-05-16	Roll-off Truck	Tanker	Tanker	NA	NA	NA	NA	NA	2021	-96.07032131	65.02320323	NA
220	2021-05-16	NA	NA	NA	NA	NA	NA	Tractor;Tanker	NA	2021	-96.13314167	65.05734592	NA
221	2021-05-16	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.41264139	65.30637618	NA
222	2021-05-17	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.07317176	65.02138597	NA
223	2021-05-17	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.324227	64.862125	NA
224	2021-05-18	Heavy Equipment	Heavy Equipment	NA	NA	NA	NA	NA	NA	2021	-96.18974855	65.2037356	NA

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
225	2021-05-18	Heavy Equipment	NA	NA	Heavy Equipment	Fuel Truck	Heavy Equipment	Fuel Truck, Tractor, Light Truck	NA	2021	-96.16229047	65.1873079	NA
226	2021-05-18	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.04568277	65.08304217	NA
227	2021-05-20	NA	NA	NA	NA	NA	NA	NA	Blast	2021	-96.706238	65.39752523	NA
228	2021-05-24	LHT; Blast	NA	LHT	LHT	NA	LHT	LHT	NA	2021	-96.6037909	65.38622	NA
229	2021-05-28	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.69620332	65.4176116	NA
230	2021-05-28	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.6961489	65.41763276	NA
231	2021-06-04	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.73299995	65.39555559	NA
232	2021-06-04	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.66660461	65.40138702	NA
233	2021-06-05	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.70382753	65.39708341	NA
234	2021-06-08	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.66660461	65.40138702	NA
235	2021-06-08	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.71963888	65.39913753	NA
236	2021-06-09	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.66660461	65.40138702	NA
237	2021-06-18	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.07316686	65.02138221	NA
238	2021-08-05	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.6859007	65.41691236	NA
239	2021-08-19	Other	NA	NA	Light Truck	NA	NA	NA	NA	2021	-96.66649872	65.40162575	NA
240	2021-08-19	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.6665677	65.40144259	NA
241	2021-08-20	NA	NA	NA	NA	NA	NA	Blast	NA	2021	-96.66723404	65.40147383	NA
242	2021-08-20	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.66723404	65.40147383	NA
243	2021-08-22	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.71925659	65.40345001	NA
244	2021-08-22	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.71721245	65.41073676	NA
245	2021-08-24	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.73357544	65.39524384	NA
246	2021-09-28	NA	NA	NA	NA	NA	Blast	NA	NA	2021	-96.73357543	65.39524384	Y
247	2021-09-28	NA	NA	Heavy Equipment	NA	NA	Heavy Equipment	Light Truck	NA	2021	-96.73357543	65.39524384	Y
248	2021-10-22	Blast	NA	NA	NA	NA	NA	NA	NA	2021	-96.66658177	65.40145852	N
249	2021-11-05	NA	Convoy	Convoy	Convoy	NA	NA	NA	NA	2021	-96.07371667	65.02115	N
250	2021-12-09	NA	NA	NA	NA	NA	NA	NA	NA	2021	-96.30698333	64.6446	N
251	2022-01-29	NA	Blast	NA	NA	NA	Heavy Equipment	Heavy Equipment	NA	2022	-96.66656352	65.40179525	No
252	2022-04-03	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.42279832	65.22691481	No
253	2022-04-03	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.42279832	65.22691481	No
254	2022-04-08	NA	NA	Heavy Equipment	NA	NA	NA	Heavy Equipment	Heavy Equipment	2022	-96.41099866	65.22742551	Yes
255	2022-04-08	NA	Light Truck	NA	NA	NA	NA	NA	Heavy Equipment	2022	-96.64636867	65.40520371	No
256	2022-04-09	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.21807032	64.96501827	Yes
257	2022-04-09	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.05441453	65.0850301	No
258	2022-04-09	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.24825645	64.57509425	Yes
259	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.39080148	65.2258375	No
260	2022-04-10	Maintenance Vehicle	Heavy Equipment	Maintenance Vehicle	Maintenance Vehicle	Maintenance Vehicle	Maintenance Vehicle	Maintenance Vehicle	Maintenance Vehicle	2022	-96.55598517	65.34892665	No
261	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.55598822	65.3489138	No
262	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.55599925	65.34888885	Yes
263	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.62162428	65.40070639	No
264	2022-04-10	NA	NA	NA	Blast	NA	NA	NA	NA	2022	-96.62162428	65.40070639	No
265	2022-04-10	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.62162428	65.40070639	No
266	2022-04-11	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.62130363	65.4004251	No

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
267	2022-04-11	NA	NA	NA	NA	Blast	NA	NA	NA	2022	-96.64805819	65.40517327	No
268	2022-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.58105519	65.35406488	Yes
269	2022-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.00818333	65.07064323	Yes
270	2022-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.00815872	65.07064774	Yes
271	2022-04-15	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.61996667	65.40013333	Yes
272	2022-04-15	NA	Light Truck	Blast	NA	NA	Light Truck	NA	NA	2022	-96.72225442	65.39873212	No
273	2022-04-16	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.45447958	65.23166853	No
274	2022-04-16	NA	NA	NA	NA	NA	Blast	NA	NA	2022	-96.66499301	65.40275111	No
275	2022-04-17	NA	NA	NA	NA	NA	NA	NA	NA	2022	-95.99750195	65.05240395	No
276	2022-04-18	NA	NA	NA	NA	NA	NA	NA	NA	2022	-95.93920505	64.30977479	No
277	2022-04-19	NA	NA	Heavy Equipment	NA	NA	Heavy Equipment	Heavy Equipment	NA	2022	-96.16722208	65.19602827	Yes
278	2022-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.1775229	65.0229587	No
279	2022-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.1775229	65.0229587	Yes
280	2022-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.1775229	65.0229587	Yes
281	2022-04-19	NA	NA	NA	NA	Heavy Equipment	NA	NA	NA	2022	-96.71779491	65.39996374	No
282	2022-04-20	NA	Light Truck	NA	NA	Heavy Equipment	NA	NA	NA	2022	-96.46698867	65.23545963	No
283	2022-04-20	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.2218667	65.00080517	Yes
284	2022-04-20	NA	NA	NA	Heavy Equipment	NA	NA	NA	NA	2022	-96.16783321	65.19605901	Yes
285	2022-04-21	NA	NA	Convoy	NA	NA	NA	NA	NA	2022	-96.66024895	65.40331874	Yes
286	2022-04-21	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.16213528	65.18777647	Yes
287	2022-04-21	NA	NA	NA	Convoy	NA	NA	NA	NA	2022	-96.14534518	65.16726192	Yes
288	2022-04-21	NA	Heavy Equipment	NA	NA	NA	NA	NA	NA	2022	-96.10862188	65.13459033	No
289	2022-04-21	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.03030695	65.08290752	Yes
290	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.6666292	65.40146278	Yes
291	2022-04-22	NA	NA	NA	NA	NA	Convoy	NA	NA	2022	-96.6666292	65.40146278	Yes
292	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.6666292	65.40146278	Yes
293	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.01874685	65.04848845	No
294	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.37124923	64.67301787	Yes
295	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.01030432	65.05025773	Yes
296	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.46933344	65.32378424	No
297	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.0108904	65.0500978	Yes
298	2022-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.41310714	65.30780425	No
299	2022-04-24	NA	NA	NA	Blast	NA	NA	NA	NA	2022	-96.73041957	65.40066369	No
300	2022-04-25	NA	NA	NA	NA	NA	Heavy Equipment	Convoy	NA	2022	-96.47426557	65.24868438	No
301	2022-04-26	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.4426762	65.32069197	No
302	2022-04-26	NA	NA	NA	NA	Aircraft	NA	NA	NA	2022	-96.03198672	65.04550132	No
303	2022-04-27	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.46796033	65.23631017	No
304	2022-04-27	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.10247426	65.11987074	Yes
305	2022-04-29	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.01128518	64.37485252	No
306	2022-04-30	NA	NA	NA	NA	Blast	NA	NA	NA	2022	-96.6665196	65.40176043	No
307	2022-05-03	NA	Blast	NA	NA	NA	NA	NA	NA	2022	-96.66657043	65.40144073	No
308	2022-05-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.07110259	65.02313573	Yes

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
309	2022-05-05	NA	Blast	NA	NA	NA	NA	NA	NA	2022	-96.69641467	65.3965103	No
310	2022-05-07	NA	NA	NA	NA	Blast	NA	NA	NA	2022	-96.67888128	65.4064376	No
311	2022-05-12	Aircraft	NA	NA	NA	NA	Light Truck	NA	NA	2022	-96.07045145	65.02217493	No
312	2022-05-15	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.06439261	65.01537464	Yes
313	2022-05-19	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.07320868	65.02135715	Yes
314	2022-06-14	NA	NA	Blast	Aircraft	NA	NA	NA	NA	2022	-96.66535915	65.40063477	No
315	2022-07-31	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.21997249	64.9685522	No
316	2022-07-31	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.25471629	64.94287273	Yes
317	2022-07-31	NA	Heavy Equipment	NA	NA	NA	NA	NA	NA	2022	-96.37312945	64.67993164	Yes
318	2022-08-01	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.07187382	64.45126741	Yes
319	2022-08-01	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.11026198	64.49172435	Yes
320	2022-08-01	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.07127169	65.02307129	No
321	2022-08-01	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.21503702	65.00689697	No
322	2022-08-02	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.28574723	65.22579001	Yes
323	2022-08-02	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.11446368	64.49468994	No
324	2022-08-03	Convoy	Heavy Equipment	NA	NA	NA	NA	NA	NA	2022	-96.03292981	64.41809082	No
325	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.41428886	65.29302979	No
326	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.41397755	65.27142334	No
327	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.30641191	64.91906738	No
328	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.46695149	65.2355957	No
329	2022-08-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.3323938	64.89910889	No
330	2022-08-09	NA	NA	Heavy Equipment	NA	NA	Heavy Equipment	NA	Convoy	2022	-96.60400718	65.36114502	Yes
331	2022-08-26	NA	NA	Blast	NA	Aircraft	NA	NA	NA	2022	-96.66638557	65.4017334	No
332	2022-09-23	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.66656473	65.40142822	No
333	2022-09-24	Heavy Equipment	NA	Heavy Equipment	Heavy Equipment	Heavy Equipment	NA	NA	Heavy Equipment	2022	-96.60239446	65.37713623	No
334	2022-09-26	NA	NA	NA	Blast	NA	NA	NA	NA	2022	-96.66652281	65.40167236	No
335	2022-10-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.15263675	65.17785645	No
336	2022-10-04	NA	Heavy Equipment	Heavy Equipment	NA	NA	NA	NA	NA	2022	-96.12624195	65.15405273	No
337	2022-10-04	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.31526122	64.83380127	Yes
338	2022-10-07	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.54359678	65.34234619	No
339	2022-10-08	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.51214547	65.32971191	No
340	2022-10-15	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.45447958	65.23166853	No
341	2022-10-21	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.07329015	65.02130127	Yes
342	2022-10-30	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.0733803	65.02130127	No
343	2022-11-02	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.24680327	64.95233154	Yes
344	2022-11-02	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.33951885	64.88262939	Yes
345	2022-11-10	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.37631797	64.68786621	No
346	2022-11-12	NA	Heavy Equipment	Heavy Equipment	NA	NA	NA	NA	NA	2022	-96.60230621	65.38238525	No
347	2022-11-13	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.22280262	64.56903076	Yes
348	2022-11-17	NA	NA	NA	Light Truck	Heavy Equipment	Heavy Equipment	Light Truck	NA	2022	-96.40893205	65.28430176	No
349	2022-11-17	NA	Heavy Equipment	NA	NA	NA	Light Truck	Heavy Equipment	NA	2022	-96.42852262	65.2199707	No
350	2022-11-17	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.37146238	64.67333984	Yes
351	2022-11-18	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.32609672	64.65606689	Yes
352	2022-11-20	NA	NA	NA	NA	NA	NA	NA	NA	2022	-96.3273194	64.8112793	No

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
353	2022-11-23	NA	Light Truck	NA	NA	NA	NA	NA	NA	2022	-96.28306214	65.22668457	No
354	2022-11-26	NA	Heavy Equipment	NA	Heavy Equipment	Heavy Equipment	Tanker	Heavy Equipment	NA	2022	-96.62858355	65.40332031	No
355	2023-03-30	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.23867151	64.95483398	Yes
356	2023-03-31	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.35583992	64.7364502	Yes
357	2023-04-01	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.06180441	65.09124756	Yes
358	2023-04-01	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.145	65.16674805	No
359	2023-04-01	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.2437	65.21966553	Yes
360	2023-04-03	NA	Convoy	Convoy	Convoy	NA	NA	NA	NA	2023	-95.99454854	65.05688477	Yes
361	2023-04-04	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.22457718	64.98718262	Yes
362	2023-04-05	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.25158494	64.94891357	No
363	2023-03-30	Heavy Equipment	NA	Heavy Equipment	Heavy Equipment	NA	NA	NA	NA	2023	-96.54625757	65.34368894	Yes
364	2023-04-08	NA	Light Truck	Light Truck	NA	NA	NA	NA	NA	2023	-96.18693505	65.01470947	No
365	2023-04-07	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.66659717	65.40148926	No
366	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.66659717	65.40148926	No
367	2023-04-12	NA	Light Truck	NA	NA	NA	NA	NA	NA	2023	-96.66659717	65.40148926	Yes
368	2023-04-10	NA	NA	NA	Convoy	NA	NA	NA	NA	2023	-96.03010645	65.04632568	Yes
369	2023-04-15	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.60235	65.37683105	Yes
370	2023-04-15	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.60261667	65.36560059	Yes
371	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.66659717	65.40148926	Yes
372	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.020609	65.080258	Yes
373	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.020609	65.080258	Yes
374	2023-04-15	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.14354307	65.05554199	Yes
375	2023-04-12	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.37826667	64.69146729	Yes
376	2023-04-09	NA	NA	NA	NA	NA	Convoy	NA	NA	2023	-96.09730336	65.11499023	Yes
377	2023-04-10	NA	NA	NA	NA	NA	NA	Light Truck	NA	2023	-96.63238252	65.40477781	No
378	2023-04-10	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.60683474	65.39318845	Yes
379	2023-04-11	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.6329453	65.40411374	No
380	2023-04-11	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.63295793	65.40411374	Yes
381	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.620775	65.40020749	No
382	2023-04-14	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.60225916	65.37716036	No
383	2023-04-14	NA	Convoy	Convoy	NA	NA	NA	NA	NA	2023	-96.44545583	65.32177732	No
384	2023-04-15	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.0734269	65.02124023	No
385	2023-04-16	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.18638513	65.01501465	Yes
386	2023-04-16	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.30177276	64.92462158	No
387	2023-04-18	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.63295793	65.40411374	No
388	2023-04-17	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.32189777	64.84722898	Yes
389	2023-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.07342705	65.02124021	No
390	2023-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.07342705	65.02124021	No
391	2023-04-30	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.31511618	64.83319092	No

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
392	2023-05-23	NA	NA	NA	NA	NA	NA	NA	Convoy	2023	-96.09228266	65.03778076	No
393	2023-06-21	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.07369983	65.0211792	No
394	2023-10-24	Heavy Equipment	NA	Tanker	NA	NA	Tanker	Heavy Equipment	NA	2023	-96.60003674	65.35797119	No
395	2023-10-22	NA	Heavy Equipment	Heavy Equipment	Heavy Equipment	NA	NA	Heavy Equipment	NA	2023	-96.66661909	65.40142819	Yes
396	2023-10-24	NA	NA	Light Truck	NA	NA	NA	NA	NA	2023	-96.66658429	65.40136719	No
397	2023-10-27	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.6027059	65.36505124	Yes
398	2023-10-27	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.59262888	65.355957	No
399	2023-10-27	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.59215857	65.355957	No
400	2023-10-28	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.07370258	65.02117917	Yes
401	2023-10-28	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.01488327	64.38830564	No
402	2023-10-31	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.37330395	64.67999265	No
403	2023-11-02	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.3720009	64.6762695	No
404	2023-11-02	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.33443142	64.65618894	No
405	2023-10-29	Heavy Equipment	NA	NA	NA	NA	NA	NA	NA	2023	-96.66662244	65.40142822	Yes
406	2023-11-07	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.37091667	64.74804688	Yes
407	2023-11-06	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.33808333	64.89556885	No
408	2023-11-09	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.28005	64.61932373	No
409	2023-11-12	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.3377803	64.78826901	Yes
410	2023-11-08	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.3471258	64.7698364	No
411	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.01581688	64.38208008	No
412	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.0802399	64.45458984	No
413	2023-11-11	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.36201315	64.75671387	No
414	2023-11-01	NA	Heavy Equipment	Light Truck	NA	NA	NA	NA	NA	2023	-96.03221505	65.08325192	Yes
415	2023-11-17	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.22065309	64.99853513	Yes
416	2023-11-18	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.34191615	64.72253415	Yes
417	2023-12-06	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.3707172	64.66748044	No
418	2023-12-06	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.08516365	64.46765134	No
419	2023-12-01	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.35804665	64.72729489	No
420	2023-12-08	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.07764107	64.45355225	Yes
421	2023-12-12	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.35923098	64.72796631	Yes
422	2023-12-16	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.32383275	64.85174561	No
423	2023-12-17	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.32478738	64.81390381	No
424	2023-12-18	NA	NA	NA	NA	NA	NA	NA	NA	2023	-96.33683558	64.78894043	No
425	2024-01-01	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.3731164	64.70605469	Yes
426	2024-01-02	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.32651295	64.82104492	No
427	2024-01-04	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.35394022	64.76385498	Yes
428	2024-01-06	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.32468307	64.81408689	Yes
429	2024-01-11	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07065322	64.4508667	No
430	2024-02-10	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.35817221	64.72717282	Yes
431	2024-02-21	NA	Maintenance Vehicle	NA	NA	NA	NA	Maintenance Vehicle	NA	2024	-96.16761665	65.02709961	No
432	2024-03-09	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.3466666	64.71832273	Yes
433	2024-04-06	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.21127538	65.20965576	No

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
434	2024-04-06	Heavy Equipment	NA	NA	Heavy Equipment	NA	Heavy Equipment	Heavy Equipment	NA	2024	-96.42628165	65.22235107	Yes
435	2024-04-08	NA	NA	NA	NA	NA	NA	Heavy Equipment	NA	2024	-96.00516198	65.06835938	Yes
436	2024-04-11	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.2818622	65.22686765	No
437	2024-04-15	NA	NA	NA	NA	Light Truck	NA	NA	NA	2024	-96.1291024	65.05352783	Yes
438	2024-04-16	Maintenance Vehicle	NA	NA	NA	Maintenance Vehicle	NA	Maintenance Vehicle	NA	2024	-96.32637992	64.9019165	Yes
439	2024-04-18	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.16871607	65.0267334	No
440	2024-04-18	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.22285673	65.00238037	No
441	2024-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.66592703	65.40209958	Yes
442	2024-04-23	Maintenance Vehicle	NA	NA	NA	Light Truck	NA	Light Truck	NA	2024	-96.3599816	64.73150635	No
443	2024-04-22	NA	NA	NA	NA	NA	NA	NA	Heavy Equipment	2024	-96.35026118	64.71716309	No
444	2024-04-22	NA	NA	Tanker	NA	NA	NA	NA	NA	2024	-96.07015685	65.02185059	No
445	2024-04-25	Light Truck	NA	NA	NA	NA	NA	NA	NA	2024	-96.26140703	64.58001709	No
446	2024-04-24	NA	Tanker	Convoy	NA	NA	NA	NA	NA	2024	-96.07002592	65.02178955	No
447	2024-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.06998333	65.02185059	No
448	2024-04-22	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07021935	65.02178955	No
449	2024-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07025971	65.02185059	No
450	2024-04-25	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07015155	65.02185059	No
451	2024-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07018252	65.02185059	No
452	2024-04-19	NA	Convoy	NA	NA	NA	NA	NA	NA	2024	-96.07031623	65.02172852	Yes
453	2024-04-19	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.0702595	65.02178955	Yes
454	2024-05-05	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07063	65.02185056	Yes
455	2024-04-23	Convoy	NA	NA	Convoy	NA	NA	NA	NA	2024	-96.63288858	65.40399167	No
456	2024-04-23	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.63323017	65.40393064	No
457	2024-05-09	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.33844287	64.79083252	No
458	2024-05-12	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.1443009	65.05517578	Yes
459	2024-05-09	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.32816646	64.8738403	Yes
460	2024-05-08	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.30573809	64.9349365	Yes
461	2024-05-09	NA	NA	NA	NA	NA	NA	NA	Convoy	2024	-96.06351014	65.01916504	No
462	2024-06-25	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.69149533	65.41680908	No
463	2024-07-05	NA	NA	Blast	Blast	Convoy	Light Truck	NA	Heavy Equipment	2024	-96.68645921	65.41436765	Yes
464	2024-07-08	NA	NA	NA	NA	Blast	NA	NA	NA	2024	-96.68217033	65.41424558	Yes
465	2024-05-09	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07008403	65.02185059	No
466	2024-07-26	NA	NA	NA	NA	NA	NA	NA	Convoy	2024	-96.70957429	65.39965233	No
467	2024-08-11	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.66974224	65.40252683	No
468	2024-09-30	NA	NA	NA	NA	NA	NA	Blast	NA	2024	-96.73790186	65.40490086	No
469	2024-10-05	NA	NA	NA	Tanker	NA	NA	NA	NA	2024	-96.0844612	64.46588135	No
470	2024-10-15	NA	NA	NA	NA	NA	NA	Tanker	NA	2024	-96.23452582	64.56732178	Yes

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Disturbance 9	Disturbance 12	Disturbance 15	Disturbance 18	Disturbance 21	Disturbance 24	Disturbance 27	Disturbance 30	Year	Long	Lat	Reconnaissance Survey
471	2024-10-17	NA	NA	NA	NA	NA	NA	NA	Convoy	2024	-96.07013451	65.02185056	Yes
472	2024-10-20	NA	NA	NA	NA	NA	Aircraft	NA	Aircraft	2024	-96.37089137	64.74804688	Yes
473	2024-10-22	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.36518202	64.7542114	Yes
474	2024-10-27	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.04760848	64.43621826	No
475	2024-10-27	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.03991983	64.42785645	No
476	2024-10-28	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.29164027	64.93353271	Yes
477	2024-10-31	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.2228867	64.56896973	No
478	2024-11-01	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.01679968	64.38616943	No
479	2024-11-01	Aircraft	NA	NA	NA	NA	NA	NA	NA	2024	-96.02870242	64.41241455	No
480	2024-11-04	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.20321953	64.55883789	Yes
481	2024-11-05	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.30700602	64.92871094	No
482	2024-11-08	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.202592	64.56878662	Yes
483	2024-11-22	NA	NA	NA	NA	Aircraft	NA	Aircraft	Aircraft	2024	-96.34237792	64.72320557	No
484	2024-11-24	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.34948598	64.76733398	No
485	2024-11-27	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.37320963	64.67962646	No
486	2024-11-28	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.60172241	65.3727417	Yes
487	2024-11-28	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.54926642	65.34649658	Yes
488	2024-11-28	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.18402908	65.2020874	No
489	2024-11-29	Convoy	NA	NA	NA	NA	NA	NA	NA	2024	-96.31365433	64.91033936	No
490	2024-10-26	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.07020849	65.02178955	Yes
491	2024-12-11	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.30121525	64.92322927	Yes
492	2024-12-14	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.21807117	64.96453857	Yes
493	2024-12-17	NA	NA	NA	NA	NA	NA	NA	NA	2024	-96.31611817	64.82635382	No
494	2024-12-23	Tanker	NA	Tanker	NA	NA	NA	NA	NA	2024	-96.12179733	64.49725342	No

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
1	2020-04-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	25-Mar	1	1	0	Spring Migration	Open
2	2020-04-25	NA	NA	NA	NA	NA	NA	NA	NA	NA	130	>100	2	1	1	Spring Migration	Open
3	2020-08-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	150	>100	3	1	0	Calving and Summer	Open
4	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	4	1	0	Calving and Summer	Closed
5	2020-08-21	NA	NA	NA	NA	NA	NA	NA	NA	NA	58	51-100	5	1	0	Calving and Summer	Open
6	2020-08-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	26-50	6	0	0	Calving and Summer	Open
7	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	7	0	0	Calving and Summer	Closed
8	2020-08-21	NA	NA	NA	NA	NA	NA	NA	NA	NA	101	>100	8	1	0	Calving and Summer	Open
9	2020-04-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	25-Mar	9	0	0	Spring Migration	Open
10	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	10	0	0	Calving and Summer	Closed
11	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	212	>100	11	0	0	Calving and Summer	Closed
12	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	12	0	0	Calving and Summer	Closed
13	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	26-50	13	0	1	Calving and Summer	Closed
14	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	14	1	0	Calving and Summer	Closed
15	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	36	26-50	15	1	0	Calving and Summer	Closed
16	2020-08-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	16	1	0	Calving and Summer	Open
17	2020-05-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	17	0	0	Spring Migration	Open
18	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	18	1	0	Calving and Summer	Closed
19	2020-08-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	19	1	0	Calving and Summer	Open
20	2020-08-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	20	0	0	Calving and Summer	Closed
21	2020-08-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	21	1	0	Calving and Summer	Open
22	2020-04-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	25-Mar	22	0	0	Spring Migration	Open
23	2020-05-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	67	51-100	23	0	0	Spring Migration	Open
24	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	24	1	0	Calving and Summer	Closed
25	2020-08-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	25	0	0	Calving and Summer	Closed
26	2020-05-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	35	26-50	26	0	0	Spring Migration	Open
27	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	27	1	0	Spring Migration	Open
28	2020-08-16	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	28	1	0	Calving and Summer	Open
29	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	29	0	0	Spring Migration	Open
30	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	30	1	0	Spring Migration	Open
31	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	25-Mar	31	0	0	Spring Migration	Open
32	2020-05-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	32	1	0	Spring Migration	Open
33	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	25-Mar	33	0	0	Spring Migration	Closed
34	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	34	1	0	Spring Migration	Open
35	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	35	26-50	35	0	0	Spring Migration	Open
36	2020-05-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	36	1	0	Spring Migration	Open
37	2020-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	25-Mar	37	1	0	Spring Migration	Open
38	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	28	26-50	38	0	0	Spring Migration	Open
39	2020-05-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	39	1	0	Spring Migration	Open
40	2020-05-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	40	1	0	Spring Migration	Open
41	2020-05-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	41	1	0	Spring Migration	Open
42	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	35	26-50	42	0	0	Spring Migration	Closed
43	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	43	0	0	Spring Migration	Closed
44	2020-05-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	35	26-50	44	1	0	Spring Migration	Open
45	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	45	0	0	Spring Migration	Closed
46	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	46	0	0	Spring Migration	Open
47	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	26	26-50	47	0	0	Spring Migration	Closed
48	2020-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	23	25-Mar	48	1	0	Spring Migration	Open

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
49	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	25-Mar	49	0	0	Spring Migration	Closed
50	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	50	0	0	Spring Migration	Open
51	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	25-Mar	51	0	0	Spring Migration	Open
52	2020-05-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	25	25-Mar	52	1	0	Spring Migration	Open
53	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	53	0	1	Spring Migration	Closed
54	2020-05-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	19	25-Mar	54	1	0	Spring Migration	Open
55	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	28	26-50	55	0	0	Spring Migration	Open
56	2020-05-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	26-50	56	1	1	Spring Migration	Open
57	2020-05-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	57	1	0	Spring Migration	Open
58	2020-05-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	47	26-50	58	1	0	Spring Migration	Open
59	2020-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	25-Mar	59	1	0	Spring Migration	Open
60	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	25-Mar	60	1	0	Spring Migration	Closed
61	2020-05-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	3	25-Mar	61	0	1	Spring Migration	Open
62	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	14	25-Mar	62	0	0	Spring Migration	Open
63	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	25-Mar	63	1	0	Spring Migration	Open
64	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	35	26-50	64	1	0	Spring Migration	Open
65	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	25-Mar	65	0	0	Spring Migration	Open
66	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	52	51-100	66	1	0	Spring Migration	Closed
67	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	101	>100	67	1	0	Spring Migration	Open
68	2020-08-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	533	>100	68	1	0	Calving and Summer	Closed
69	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	>100	69	1	0	Calving and Summer	Closed
70	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	25-Mar	70	0	0	Spring Migration	Closed
71	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	25-Mar	71	1	0	Spring Migration	Open
72	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	193	>100	72	1	0	Calving and Summer	Closed
73	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	73	1	0	Spring Migration	Closed
74	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	65	51-100	74	0	0	Spring Migration	Open
75	2020-08-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	26-50	75	1	0	Calving and Summer	Closed
76	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	76	0	0	Calving and Summer	Closed
77	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	400	>100	77	0	0	Calving and Summer	Closed
78	2020-05-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	72	51-100	78	1	0	Spring Migration	Open
79	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	79	0	0	Spring Migration	Open
80	2020-05-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	25-Mar	80	1	0	Spring Migration	Open
81	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	>100	81	1	0	Spring Migration	Closed
82	2020-08-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	82	1	0	Calving and Summer	Open
83	2020-08-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	83	0	0	Calving and Summer	Closed
84	2020-05-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	84	1	0	Spring Migration	Open
85	2020-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	62	51-100	85	1	0	Spring Migration	Closed
86	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	25-Mar	86	0	0	Spring Migration	Open
87	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	87	1	0	Spring Migration	Open
88	2020-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	88	1	0	Spring Migration	Open
89	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	25-Mar	89	1	0	Spring Migration	Closed
90	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	23	25-Mar	90	1	0	Spring Migration	Open
91	2020-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	91	0	0	Spring Migration	Closed
92	2020-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	21	25-Mar	92	1	0	Spring Migration	Open
93	2020-05-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	25-Mar	93	1	0	Spring Migration	Open
94	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	94	1	0	Spring Migration	Open
95	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	21	25-Mar	95	1	0	Spring Migration	Open
96	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	96	1	0	Spring Migration	Open
97	2020-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	34	26-50	97	1	0	Spring Migration	Open

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
98	2020-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	52	51-100	98	0	0	Spring Migration	Closed
99	2020-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	50	26-50	99	1	0	Spring Migration	Open
100	2020-08-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	300	>100	100	0	0	Calving and Summer	Closed
101	2020-08-16	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	101	1	0	Calving and Summer	Open
102	2020-08-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	26-50	102	1	0	Calving and Summer	Open
103	2020-11-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	350	>100	103	1	0	Fall Migration	Open
104	2020-11-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	135	>100	104	1	0	Fall Migration	Open
105	2020-11-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	52	51-100	105	0	0	Fall Migration	Open
106	2020-11-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	27	26-50	106	0	0	Fall Migration	Closed
107	2020-11-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	39	26-50	107	0	0	Fall Migration	Closed
108	2020-11-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	52	51-100	108	1	0	Fall Migration	Open
109	2020-11-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	212	>100	109	1	0	Fall Migration	Open
110	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	27	26-50	110	1	0	Fall Migration	Open
111	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	170	>100	111	1	0	Fall Migration	Closed
112	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	28	26-50	112	0	0	Fall Migration	Closed
113	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	123	>100	113	1	0	Fall Migration	Closed
114	2020-11-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	26-50	114	0	0	Fall Migration	Closed
115	2020-11-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	31	26-50	115	0	0	Fall Migration	Closed
116	2020-11-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	26-50	116	0	0	Fall Migration	Closed
117	2021-03-31	NA	NA	50-100	NA	NA	NA	NA	NA	NA	62	51-100	117	1	0	Spring Migration	Open
118	2021-04-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	25-Mar	118	1	0	Spring Migration	Closed
119	2021-04-07	NA	NA	50-100	NA	NA	NA	NA	NA	NA	52	51-100	119	0	0	Spring Migration	Closed
120	2021-04-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	25-Mar	120	1	0	Spring Migration	Closed
121	2021-04-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	25-Mar	121	1	0	Spring Migration	Speed Restriction
122	2021-04-13	NA	NA	50-100	NA	NA	NA	NA	NA	NA	63	51-100	122	1	0	Spring Migration	Speed Restriction
123	2021-04-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	25-Mar	123	0	0	Spring Migration	Speed Restriction
124	2021-04-13	NA	NA	50-100	29	NA	NA	NA	NA	NA	72	51-100	124	1	0	Spring Migration	Speed Restriction
125	2021-04-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	25-Mar	125	0	0	Spring Migration	Speed Restriction
126	2021-04-14	NA	NA	201-500	41	NA	NA	NA	NA	NA	300	>100	126	1	0	Spring Migration	Closed
127	2021-04-14	NA	NA	201-500	62	NA	NA	NA	NA	NA	476	>100	127	0	1	Spring Migration	Closed
128	2021-04-14	NA	NA	50-100	NA	NA	NA	NA	NA	NA	76	51-100	128	1	0	Spring Migration	Closed
129	2021-04-14	NA	NA	50-100	NA	NA	NA	NA	NA	NA	70	51-100	129	1	0	Spring Migration	Closed
130	2021-04-18	NA	NA	50-100	NA	NA	NA	NA	NA	NA	52	51-100	130	1	0	Spring Migration	Closed
131	2021-04-18	NA	NA	50-100	NA	NA	NA	NA	NA	NA	52	51-100	131	0	0	Spring Migration	Closed
132	2021-04-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	25-Mar	132	1	0	Spring Migration	Closed
133	2021-04-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	25-Mar	133	0	0	Spring Migration	Closed
134	2021-04-19	NA	NA	50-100	NA	NA	NA	NA	NA	NA	14	25-Mar	134	1	0	Spring Migration	Speed Restriction
135	2021-04-19	NA	NA	300-1000	NA	NA	NA	NA	NA	NA	14	25-Mar	135	1	0	Spring Migration	Closed
136	2021-04-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	25-Mar	136	1	0	Spring Migration	Speed Restriction
137	2021-04-20	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	137	1	0	Spring Migration	Closed
138	2021-04-21	NA	NA	201-500	73	NA	NA	NA	NA	NA	83	51-100	138	0	0	Spring Migration	Closed
139	2021-04-22	NA	NA	201-500	NA	NA	NA	NA	NA	NA	20	25-Mar	139	0	0	Spring Migration	Closed
140	2021-04-23	NA	NA	201-500	NA	NA	NA	NA	NA	NA	62	51-100	140	1	0	Spring Migration	Closed
141	2021-04-23	NA	NA	201-500	NA	NA	NA	NA	NA	NA	15	25-Mar	141	0	0	Spring Migration	Closed
142	2021-04-23	NA	NA	201-500	NA	NA	NA	NA	NA	NA	21	25-Mar	142	0	0	Spring Migration	Closed

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
143	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	26-50	143	0	0	Spring Migration	Closed
144	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	19	25-Mar	144	0	0	Spring Migration	Closed
145	2021-04-23	NA	NA	101-200	NA	NA	NA	NA	NA	NA	210	>100	145	0	0	Spring Migration	Closed
146	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	25-Mar	146	0	0	Spring Migration	Closed
147	2021-04-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	25-Mar	147	0	0	Spring Migration	Closed
148	2021-04-24	NA	NA	NA	14	NA	NA	NA	NA	NA	200	>100	148	0	1	Spring Migration	Closed
149	2021-04-24	NA	NA	NA	14	NA	NA	NA	NA	NA	200	>100	149	1	1	Spring Migration	Closed
150	2021-04-25	NA	NA	50-100	NA	NA	NA	NA	NA	NA	50	26-50	150	0	0	Spring Migration	Closed
151	2021-04-25	NA	NA	50-100	NA	NA	NA	NA	NA	NA	27	26-50	151	0	0	Spring Migration	Closed
152	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	152	0	0	Spring Migration	Closed
153	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	153	1	0	Spring Migration	Closed
154	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	26-50	154	0	0	Spring Migration	Closed
155	2021-04-26	NA	NA	50-100	NA	NA	NA	NA	NA	NA	58	51-100	155	0	0	Spring Migration	Closed
156	2021-04-26	NA	NA	NA	NA	NA	NA	NA	NA	NA	26	26-50	156	1	0	Spring Migration	Closed
157	2021-04-29	NA	NA	101-200	NA	NA	NA	NA	NA	NA	144	>100	157	1	1	Spring Migration	Closed
158	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	25-Mar	158	0	0	Spring Migration	Closed
159	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	25-Mar	159	1	0	Spring Migration	Closed
160	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	25-Mar	160	1	0	Spring Migration	Closed
161	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	25-Mar	161	1	0	Spring Migration	Closed
162	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	25-Mar	162	1	0	Spring Migration	Closed
163	2021-04-29	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	25-Mar	163	0	0	Spring Migration	Closed
164	2021-04-30	NA	NA	50-100	NA	NA	NA	NA	NA	NA	94	51-100	164	1	0	Spring Migration	Closed
165	2021-04-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	25-Mar	165	0	0	Spring Migration	Closed
166	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	166	0	0	Spring Migration	Closed
167	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	24	25-Mar	167	1	0	Spring Migration	Closed
168	2021-05-01	NA	NA	50-100	NA	NA	NA	NA	NA	NA	64	51-100	168	0	0	Spring Migration	Closed
169	2021-05-01	NA	NA	50-100	NA	NA	NA	NA	NA	NA	24	25-Mar	169	1	0	Spring Migration	Closed
170	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	24	25-Mar	170	0	0	Spring Migration	Closed
171	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	25-Mar	171	0	1	Spring Migration	Closed
172	2021-05-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	172	0	0	Spring Migration	Closed
173	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	25-Mar	173	1	0	Spring Migration	Closed
174	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	174	1	0	Spring Migration	Closed
175	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	175	1	0	Spring Migration	Closed
176	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	7	25-Mar	176	0	0	Spring Migration	Closed
177	2021-05-02	NA	NA	50-100	NA	NA	NA	NA	NA	NA	63	51-100	177	0	0	Spring Migration	Closed
178	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	178	0	0	Spring Migration	Closed
179	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	179	1	0	Spring Migration	Closed
180	2021-05-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	180	0	0	Spring Migration	Closed
181	2021-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	181	1	0	Spring Migration	Closed
182	2021-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	25-Mar	182	1	0	Spring Migration	Closed
183	2021-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	25-Mar	183	1	0	Spring Migration	Closed
184	2021-05-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	25-Mar	184	1	0	Spring Migration	Closed

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
185	2021-05-04	NA	NA	50-100	NA	NA	NA	NA	NA	NA	55	51-100	185	0	0	Spring Migration	Closed
186	2021-05-04	NA	NA	50-100	NA	NA	NA	NA	NA	NA	42	26-50	186	0	0	Spring Migration	Closed
187	2021-05-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	35	26-50	187	0	0	Spring Migration	Closed
188	2021-05-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	188	0	0	Spring Migration	Closed
189	2021-05-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	25	25-Mar	189	0	0	Spring Migration	Closed
190	2021-05-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	49	26-50	190	1	0	Spring Migration	Closed
191	2021-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	25-Mar	191	1	0	Spring Migration	Speed Restriction
192	2021-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	25-Mar	192	1	0	Spring Migration	Speed Restriction
193	2021-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	26-50	193	0	0	Spring Migration	Closed
194	2021-05-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	25-Mar	194	1	0	Spring Migration	Closed
195	2021-05-07	NA	NA	50-100	NA	NA	NA	NA	NA	NA	19	25-Mar	195	0	0	Spring Migration	Speed Restriction
196	2021-05-07	NA	NA	50-100	NA	NA	NA	NA	NA	NA	66	51-100	196	1	0	Spring Migration	Speed Restriction
197	2021-05-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	197	1	0	Spring Migration	Speed Restriction
198	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	26-50	198	0	0	Spring Migration	Speed Restriction
199	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	25-Mar	199	1	0	Spring Migration	Speed Restriction
200	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	25-Mar	200	0	0	Spring Migration	Speed Restriction
201	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	26-50	201	1	0	Spring Migration	Open
202	2021-05-08	NA	NA	50-100	NA	NA	NA	NA	NA	NA	36	26-50	202	1	0	Spring Migration	Open
203	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	203	1	0	Spring Migration	Open
204	2021-05-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	204	1	0	Spring Migration	Speed Restriction
205	2021-05-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	205	1	0	Spring Migration	Speed Restriction
206	2021-05-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	206	1	0	Spring Migration	Speed Restriction
207	2021-05-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	207	1	0	Spring Migration	Speed Restriction
208	2021-05-10	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	208	1	0	Spring Migration	Speed Restriction
209	2021-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	39	26-50	209	1	0	Spring Migration	Speed Restriction
210	2021-05-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	210	1	0	Spring Migration	Speed Restriction
211	2021-05-11	NA	NA	NA	35	NA	NA	NA	NA	NA	62	51-100	211	0	0	Spring Migration	Speed Restriction
212	2021-05-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	212	1	0	Spring Migration	Open
213	2021-05-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	213	1	0	Spring Migration	Open
214	2021-05-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	214	0	0	Spring Migration	Open
215	2021-05-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	26-50	215	1	0	Spring Migration	Open
216	2021-05-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	29	26-50	216	0	0	Spring Migration	Speed Restriction
217	2021-05-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	26-50	217	1	0	Spring Migration	Open
218	2021-05-15	NA	NA	NA	NA	NA	NA	NA	NA	NA	28	26-50	218	1	0	Spring Migration	Open
219	2021-05-16	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	219	1	0	Spring Migration	Open
220	2021-05-16	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	220	1	0	Spring Migration	Open
221	2021-05-16	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	221	0	0	Spring Migration	Open
222	2021-05-17	NA	NA	50-100	NA	NA	NA	NA	NA	NA	8	25-Mar	222	1	0	Spring Migration	Speed Restriction
223	2021-05-17	NA	NA	NA	NA	NA	NA	NA	NA	NA	37	26-50	223	0	0	Spring Migration	Speed Restriction
224	2021-05-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	224	1	0	Spring Migration	Open

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
225	2021-05-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	225	1	0	Spring Migration	Open
226	2021-05-18	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	226	0	0	Spring Migration	Open
227	2021-05-20	NA	NA	NA	NA	NA	NA	NA	NA	NA	19	25-Mar	227	1	0	Spring Migration	Open
228	2021-05-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	25-Mar	228	1	0	Spring Migration	Open
229	2021-05-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	229	0	0	Spring Migration	Speed Restriction
230	2021-05-28	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	230	1	0	Spring Migration	Speed Restriction
231	2021-06-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	21	25-Mar	231	0	0	Calving and Summer	Open
232	2021-06-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	21	25-Mar	232	1	0	Calving and Summer	Open
233	2021-06-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	18	25-Mar	233	0	0	Calving and Summer	Open
234	2021-06-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	25-Mar	234	0	0	Calving and Summer	Open
235	2021-06-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	25-Mar	235	0	0	Calving and Summer	Open
236	2021-06-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	25-Mar	236	0	0	Calving and Summer	Open
237	2021-06-18	NA	NA	50-100	NA	NA	NA	NA	NA	NA	23	25-Mar	237	1	0	Calving and Summer	Open
238	2021-08-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	45	26-50	238	0	0	Calving and Summer	Open
239	2021-08-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	3	25-Mar	239	1	1	Calving and Summer	Speed Restriction
240	2021-08-19	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	240	0	0	Calving and Summer	Speed Restriction
241	2021-08-20	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	241	1	0	Calving and Summer	Open
242	2021-08-20	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	02-Jan	242	0	0	Calving and Summer	Open
243	2021-08-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	243	0	0	Calving and Summer	Open
244	2021-08-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	3	25-Mar	244	1	0	Calving and Summer	Open
245	2021-08-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	02-Jan	245	0	0	Calving and Summer	Open
246	2021-09-28	N	NA	101-200	14	Mixed	NA	NA	NA	NA	138	>100	246	1	0	Fall Migration	Speed Restriction
247	2021-09-28	N	NA	101-200	14	Mixed	NA	NA	NA	NA	138	>100	247	1	0	Fall Migration	Speed Restriction
248	2021-10-22	N	NA	NA	7	Mixed	NA	NA	NA	NA	7	25-Mar	248	1	0	Fall Migration	Open
249	2021-11-05	N	NA	101-200	5	Males	NA	NA	NA	NA	200	>100	249	1	0	Fall Migration	Open
250	2021-12-09	N	NA	101-200	8	Mixed	NA	NA	NA	NA	101	>100	250	0	0	Fall Migration	Closed
251	2022-01-29	No	NA	NA	10	Mixed group	29311660	Blast	NA	07- During the blast, Behavior	10	25-Mar	251	1	0	Winter	Speed Restriction
252	2022-04-03	No	NA	NA	5	Mixed group	29493202	Blast	NA	03- Pre-disturbance, Behavior	5	25-Mar	252	0	NA	Spring Migration	Closed
253	2022-04-03	No	NA	NA	5	Mixed group	29493202	Blast	NA	07- During the blast, Behavior	5	25-Mar	253	1	NA	Spring Migration	Closed
254	2022-04-08	No	NA	NA	5	Mixed group	29493204	Normal	NA	01- Behavior	5	25-Mar	254	1	0	Spring Migration	Speed Restriction
255	2022-04-08	No	NA	NA	15	Mixed group	29493205	Normal	NA	01- Behavior	15	25-Mar	255	1	0	Spring Migration	Speed Restriction
256	2022-04-09	No	NA	NA	27	Mixed group	29550582	Normal	NA	01- Behavior	27	26-50	256	0	0	Spring Migration	Open
257	2022-04-09	No	NA	101-200	21	Mixed group	29493206	Normal	NA	01- Behavior	100	51-100	257	1	0	Spring Migration	Open
258	2022-04-09	No	NA	NA	7	Mostly females	29550583	Normal	NA	01- Behavior	7	25-Mar	258	1	0	Spring Migration	Open
259	2022-04-10	No	NA	NA	60	Mixed group	29532398	Normal	NA	01- Behavior	60	51-100	259	0	0	Spring Migration	Closed
260	2022-04-10	No	NA	201-500	30	Mixed group	29532399	Convoy	NA	03- Pre-disturbance, Behavior	201	>100	260	1	0	Spring Migration	Closed
261	2022-04-10	No	NA	201-500	30	Mixed group	29532400	Convoy	NA	05- During the convoy, Behavior	201	>100	261	1	NA	Spring Migration	Closed
262	2022-04-10	No	NA	201-500	30	Mixed group	29532401	Convoy	NA	09-Post-disturbance, Behavior	201	>100	262	0	0	Spring Migration	Closed
263	2022-04-10	No	NA	201-500	20	Mixed group	29532402	Blast	NA	03- Pre-disturbance, Behavior	201	>100	263	0	0	Spring Migration	Closed
264	2022-04-10	No	NA	201-500	20	Mixed group	29532402	Blast	NA	07- During the blast, Behavior	201	>100	264	1	0	Spring Migration	Closed
265	2022-04-10	No	NA	201-500	20	Mixed group	29532402	Blast	NA	09-Post-disturbance, Behavior	201	>100	265	0	0	Spring Migration	Closed
266	2022-04-11	No	NA	201-500	350	Mixed group	29550584	Convoy	NA	03- Pre-disturbance, Behavior	201	>100	266	0	0	Spring Migration	Closed

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
267	2022-04-11	No	NA	NA	8	Mixed group	29532403	Blast	NA	03- Pre-disturbance, Behavior	8	25-Mar	267	1	0	Spring Migration	Closed
268	2022-04-14	No	NA	NA	17	Mixed group	29550585	Normal	NA	01- Behavior	17	25-Mar	268	0	0	Spring Migration	Closed
269	2022-04-14	No	NA	101-200	27	Mixed group	29550586	Normal	NA	01- Behavior	117	>100	269	0	0	Spring Migration	Closed
270	2022-04-14	No	NA	101-200	27	Mixed group	29550587	Convoy	NA	05- During the convoy, Behavior	117	>100	270	0	0	Spring Migration	Closed
271	2022-04-15	No	NA	NA	35	Mixed group	29511947	Normal	NA	01- Behavior	35	26-50	271	0	0	Spring Migration	Open
272	2022-04-15	No	NA	NA	5	Mixed group	29532397	Blast	NA	03- Pre-disturbance, Behavior	5	25-Mar	272	1	0	Spring Migration	Closed
273	2022-04-16	No	NA	NA	5	Mixed group	29532404	Convoy	NA	03- Pre-disturbance, Behavior	5	25-Mar	273	1	0	Spring Migration	Closed
274	2022-04-16	No	NA	NA	14	Mixed group	29516853	Blast	NA	03- Pre-disturbance, Behavior	14	25-Mar	274	1	0	Spring Migration	Closed
275	2022-04-17	No	NA	NA	12	Mixed group	29550588	Normal	NA	01- Behavior	12	25-Mar	275	0	0	Spring Migration	Speed Restriction
276	2022-04-18	No	NA	101-200	130	Mixed group	29611652	Normal	NA	01- Behavior	134	>100	276	0	0	Spring Migration	Open
277	2022-04-19	No	NA	NA	2	Mostly males	29611655	Normal	NA	01- Behavior	2	02-Jan	277	1	0	Spring Migration	Speed Restriction
278	2022-04-19	No	NA	101-200	123	Mixed group	29542319	Normal	NA	01- Behavior	123	>100	278	0	0	Spring Migration	Speed Restriction
279	2022-04-19	No	NA	101-200	27	Mixed group	29611653	Convoy	NA	05- During the convoy, Behavior	101	>100	279	0	0	Spring Migration	Closed
280	2022-04-19	No	NA	101-200	27	Mixed group	29611654	Convoy	NA	09-Post-disturbance, Behavior	101	>100	280	0	0	Spring Migration	Closed
281	2022-04-19	No	NA	NA	2	Mixed group	29542330	Normal	NA	01- Behavior	14	25-Mar	281	1	0	Spring Migration	Speed Restriction
282	2022-04-20	No	NA	NA	9	Mixed group	29542331	Normal	NA	01- Behavior	9	25-Mar	282	1	0	Spring Migration	Open
283	2022-04-20	No	NA	NA	84	Mixed group	29542320	Normal	NA	01- Behavior	84	51-100	283	0	0	Spring Migration	Closed
284	2022-04-20	No	NA	NA	5	Mixed group	29611656	Normal	NA	01- Behavior	40	26-50	284	1	0	Spring Migration	Open
285	2022-04-21	No	NA	NA	14	Mixed group	29542332	Convoy	NA	05- During the convoy, Behavior	1414	>100	285	1	0	Spring Migration	Closed
286	2022-04-21	No	NA	NA	2	Mostly females	29611657	Normal	NA	01- Behavior	2	02-Jan	286	0	1	Spring Migration	Closed
287	2022-04-21	No	NA	NA	14	Mixed group	29611658	Convoy	NA	05- During the convoy, Behavior	16	25-Mar	287	1	0	Spring Migration	Closed
288	2022-04-21	No	NA	NA	22	Mixed group	29611659	Convoy	NA	05- During the convoy, Behavior	22	25-Mar	288	1	0	Spring Migration	Closed
289	2022-04-21	No	NA	NA	18	Mixed group	29561641	Normal	NA	01- Behavior	18	25-Mar	289	1	0	Spring Migration	Closed
290	2022-04-22	No	NA	NA	64	Mixed group	29561642	Convoy	NA	03- Pre-disturbance, Behavior	64	51-100	290	0	0	Spring Migration	Closed
291	2022-04-22	No	NA	NA	64	Mixed group	29561642	Convoy	NA	05- During the convoy, Behavior	64	51-100	291	1	0	Spring Migration	Closed
292	2022-04-22	No	NA	NA	64	Mixed group	29561642	Convoy	NA	09-Post-disturbance, Behavior	64	51-100	292	0	0	Spring Migration	Closed
293	2022-04-22	No	NA	201-500	21	Mixed group	29611660	Normal	NA	01- Behavior	254	>100	293	1	1	Spring Migration	Closed
294	2022-04-22	No	NA	NA	12	Mixed group	29542321	Normal	NA	01- Behavior	12	25-Mar	294	0	0	Spring Migration	Speed Restriction
295	2022-04-22	No	NA	NA	9	Mixed group	29611661	Convoy	NA	05- During the convoy, Behavior	9	25-Mar	295	0	0	Spring Migration	Closed
296	2022-04-22	No	NA	NA	36	Mixed group	29561643	Convoy	NA	03- Pre-disturbance, Behavior	36	26-50	296	0	0	Spring Migration	Closed
297	2022-04-22	No	NA	NA	10	Mixed group	29611662	Convoy	NA	05- During the convoy, Behavior	10	25-Mar	297	1	0	Spring Migration	Closed
298	2022-04-22	No	NA	NA	14	Mixed group	29561644	Convoy	NA	03- Pre-disturbance, Behavior	14	25-Mar	298	0	0	Spring Migration	Closed
299	2022-04-24	NA	NA	NA	7	Mixed group	29582544	Blast	NA	03- Pre-disturbance, Behavior	7	25-Mar	299	1	0	Spring Migration	Speed Restriction
300	2022-04-25	No	NA	NA	9	Mostly females	29550589	Normal	NA	01- Behavior	9	25-Mar	300	1	1	Spring Migration	Speed Restriction
301	2022-04-26	No	NA	NA	23	Mixed group	29582548	Normal	NA	01- Behavior	98	51-100	301	1	NA	Spring Migration	Open
302	2022-04-26	No	NA	NA	2	Mixed group	29611664	Normal	NA	01- Behavior	2	02-Jan	302	1	0	Spring Migration	Closed
303	2022-04-27	No	NA	NA	10	Mixed group	29582549	Normal	NA	01- Behavior	10	25-Mar	303	0	1	Spring Migration	Closed
304	2022-04-27	No	NA	NA	36	Mixed group	29576497	Normal	NA	01- Behavior	36	26-50	304	0	0	Spring Migration	Closed
305	2022-04-29	No	NA	NA	2	Mixed group	29582547	Normal	NA	01- Behavior	2	02-Jan	305	1	0	Spring Migration	Open
306	2022-04-30	No	NA	NA	22	Mixed group	29582546	Blast	NA	03- Pre-disturbance, Behavior	22	25-Mar	306	1	0	Spring Migration	Speed Restriction
307	2022-05-03	No	NA	NA	33	Mixed group	29588552	Blast	NA	03- Pre-disturbance, Behavior	33	26-50	307	1	0	Spring Migration	Closed
308	2022-05-04	No	NA	NA	2	Mixed group	29611663	Normal	NA	01- Behavior	21	25-Mar	308	0	1	Spring Migration	Speed Restriction

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
309	2022-05-05	No	NA	NA	20	Mixed group	29622474	Blast	NA	03- Pre-disturbance, Behavior	20	25-Mar	309	1	0	Spring Migration	Open
310	2022-05-07	No	NA	NA	10	Mostly females	29611665	Blast	NA	03- Pre-disturbance, Behavior	10	25-Mar	310	1	0	Spring Migration	Open
311	2022-05-12	No	NA	NA	12	Mixed group	29647959	Normal	NA	01- Behavior	12	25-Mar	311	1	0	Spring Migration	Speed Restriction
312	2022-05-15	No	NA	NA	2	Mixed group	29736750	Normal	NA	01- Behavior	18	25-Mar	312	0	0	Spring Migration	Speed Restriction
313	2022-05-19	No	NA	NA	2	Mixed group	29684016	Normal	NA	01- Behavior	2	02-Jan	313	0	0	Spring Migration	Speed Restriction
314	2022-06-14	No	NA	NA	19	Mixed group	29826159	Blast	NA	03- Pre-disturbance, Behavior	19	25-Mar	314	1	0	Calving and Summer	Open
315	2022-07-31	No	NA	NA	10	Mixed group	29996539	Normal	NA	01- Behavior	10	25-Mar	315	0	0	Calving and Summer	Closed
316	2022-07-31	No	NA	NA	11	Mixed group	29996540	Normal	NA	01- Behavior	39	26-50	316	0	0	Calving and Summer	Closed
317	2022-07-31	No	NA	NA	10	Mixed group	29995705	Normal	N	01- Behavior	25	25-Mar	317	1	0	Calving and Summer	Closed
318	2022-08-01	No	NA	NA	4	Mostly males	30104638	Normal	W	01- Behavior	4	25-Mar	318	0	NA	Calving and Summer	Closed
319	2022-08-01	No	NA	NA	37	Mixed group	30104639	Normal	N	01- Behavior	37	26-50	319	0	0	Calving and Summer	Closed
320	2022-08-01	No	NA	NA	2	Mixed group	30053277	Normal	N	01- Behavior	2	02-Jan	320	0	0	Calving and Summer	Closed
321	2022-08-01	No	NA	NA	2	Mostly males	30053278	Normal	NA	01- Behavior	1	02-Jan	321	0	0	Calving and Summer	Closed
322	2022-08-02	No	NA	NA	5	Mostly males	30104640	Normal	NA	01- Behavior	5	25-Mar	322	0	0	Calving and Summer	Open
323	2022-08-02	No	NA	NA	7	Mixed group	30053279	Normal	N	01- Behavior	7	25-Mar	323	1	0	Calving and Summer	Speed Restriction
324	2022-08-03	No	NA	NA	2	Mixed group	30053280	Normal	N,E	01- Behavior	2	02-Jan	324	1	0	Calving and Summer	Open
325	2022-08-04	No	NA	NA	3	Mixed group	30194328	Normal	NA	01- Behavior	3	25-Mar	325	1	0	Calving and Summer	Speed Restriction
326	2022-08-04	No	NA	NA	8	Mixed group	30194329	Normal	S	01- Behavior	8	25-Mar	326	0	0	Calving and Summer	Speed Restriction
327	2022-08-04	No	NA	NA	5	Mixed group	30194326	Normal	N	01- Behavior	5	25-Mar	327	0	0	Calving and Summer	Open
328	2022-08-04	No	NA	NA	3	Mixed group	30194330	Normal	NA	01- Behavior	1	02-Jan	328	0	0	Calving and Summer	Speed Restriction
329	2022-08-04	No	NA	NA	5	Mixed group	30194327	Normal	N	01- Behavior	5	25-Mar	329	0	0	Calving and Summer	Open
330	2022-08-09	No	NA	NA	1	Mostly males	30115151	Normal	N	01- Behavior	1	02-Jan	330	1	0	Calving and Summer	Speed Restriction
331	2022-08-26	No	NA	NA	3	Mostly males	30204640	Blast	NA	03- Pre-disturbance, Behavior	3	25-Mar	331	1	0	Calving and Summer	Open
332	2022-09-23	No	NA	NA	4	Mostly males	30467096	Blast	NA	01- Behavior	4	25-Mar	332	0	NA	Fall Migration	Open
333	2022-09-24	No	NA	NA	5	Mixed group	30462872	Normal	NA	01- Behavior	5	25-Mar	333	1	0	Fall Migration	Open
334	2022-09-26	No	NA	NA	6	Mixed group	30467097	Blast	NA	03- Pre-disturbance, Behavior	6	25-Mar	334	1	0	Fall Migration	Speed Restriction
335	2022-10-04	No	NA	NA	2	Mostly males	30756082	Normal	NA	01- Behavior	2	02-Jan	335	1	0	Fall Migration	Open
336	2022-10-04	No	NA	NA	1	Mostly males	30756083	Normal	NA	01- Behavior	1	02-Jan	336	1	0	Fall Migration	Open
337	2022-10-04	No	NA	NA	26	Mixed group	30722190	Normal	S	01- Behavior	26	26-50	337	0	0	Fall Migration	Closed
338	2022-10-07	No	NA	NA	50	Mixed group	30814454	Normal	S	01- Behavior	70	51-100	338	0	1	Fall Migration	Open
339	2022-10-08	No	NA	NA	1	Mostly males	30756084	Normal	S	01- Behavior	1	02-Jan	339	0	0	Fall Migration	Closed
340	2022-10-15	No	NA	201-500	50	Mixed group	30724544	Normal	S	01- Behavior	300	>100	340	0	0	Fall Migration	Closed
341	2022-10-21	No	NA	101-200	60	Mixed group	30719125	Normal	N	01- Behavior	199	>100	341	0	0	Fall Migration	Closed
342	2022-10-30	No	NA	101-200	60	Mixed group	30796265	Normal	N	01- Behavior	101	>100	342	0	0	Fall Migration	Closed
343	2022-11-02	No	300 m -1 km	201-500	26	Mixed group	30815518	Normal	S	01- Behavior	201	>100	343	0	0	Fall Migration	Closed
344	2022-11-02	Yes They walked south and now heading west	NA	201-500	338	Mixed group	30819063	Convoy	W	01- Behavior	338	>100	344	0	1	Fall Migration	Closed
345	2022-11-10	No	300 m -1 km	NA	51	Mixed group	30868918	Normal	NA	01- Behavior	65	51-100	345	0	0	Fall Migration	Open
346	2022-11-12	No	300 m -1 km	NA	10	Mixed group	30888763	Normal	S	01- Behavior	35	26-50	346	1	0	Fall Migration	Speed Restriction
347	2022-11-13	No	0-50 m	NA	51	Mixed group	30886460	Normal	E	01- Behavior	2000	>100	347	0	0	Fall Migration	Closed
348	2022-11-17	Yes Exact same place the past days	51-100 m	NA	2	Mostly males	30913639	Normal	NA	01- Behavior	2	02-Jan	348	1	0	Fall Migration	Speed Restriction
349	2022-11-17	Yes Same place as last days and same number	300 m -1 km	NA	2	Mostly males	30913640	Normal	NA	01- Behavior	2	02-Jan	349	1	0	Fall Migration	Speed Restriction
350	2022-11-17	No	100-300 m	NA	50	Mixed group	30906302	Normal	N	01- Behavior	100	51-100	350	0	0	Fall Migration	Closed
351	2022-11-18	No	100-300 m	NA	5	Mixed group	30911766	Normal	NA	01- Behavior	100	51-100	351	0	0	Fall Migration	Closed
352	2022-11-20	No	300 m -1 km	NA	96	Mostly females	30956984	Normal	N	01- Behavior	96	51-100	352	0	0	Fall Migration	Closed

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
353	2022-11-23	No	300 m -1 km	NA	28	Mixed group	30946868	Normal	NA	01- Behavior	28	26-50	353	1	0	Fall Migration	Open
354	2022-11-26	No	100-300 m	NA	1	Juveniles	30946869	Normal	NA	01- Behavior	1	02-Jan	354	1	0	Fall Migration	Open
355	2023-03-30	No	100-300 m	NA	10	Mixed group	31482949	Normal	W	01- Behavior	100	51-100	355	0	0	Spring Migration	Closed
356	2023-03-31	No	1 - 1.5 km	NA	56	Mixed group	31489794	Normal	NA	01- Behavior	56	51-100	356	0	0	Spring Migration	Closed
357	2023-04-01	No	300 m -1 km	NA	30	Mixed group	31491320	Normal	S	01- Behavior	30	26-50	357	0	0	Spring Migration	Closed
358	2023-04-01	No	1 - 1.5 km	NA	10	Mixed group	31491321	Normal	E	01- Behavior	10	25-Mar	358	0	0	Spring Migration	Closed
359	2023-04-01	No	1 - 1.5 km	101-200	50	Mixed group	31491322	Normal	S	01- Behavior	101	>100	359	0	1	Spring Migration	Closed
360	2023-04-03	No	300 m -1 km	NA	30	Mixed group	31502264	Convoy	N	01- Behavior	390	>100	360	1	0	Spring Migration	Closed
361	2023-04-04	No	100-300 m	NA	40	Mixed group	31517336	Convoy	S	01- Behavior	40	26-50	361	0	1	Spring Migration	Closed
362	2023-04-05	No	0-50 m	NA	56	Mixed group	31517337	Normal	W	01- Behavior	56	51-100	362	0	0	Spring Migration	Closed
363	2023-03-30	No	0-50 m	NA	2	Mixed group	31520356	Normal	W	01- Behavior	2	02-Jan	363	1	1	Spring Migration	Open
364	2023-04-08	No	100-300 m	NA	50	Mixed group	31523310	Convoy	NA	01- Behavior	50	26-50	364	1	NA	Spring Migration	Closed
365	2023-04-07	No	300 m -1 km	101-200	30	Mixed group	31526729	Convoy	N	01- Behavior	101	>100	365	1	0	Spring Migration	Closed
366	2023-04-14	No	300 m -1 km	NA	93	Mixed group	31548100	Normal	E	01- Behavior	93	51-100	366	0	0	Spring Migration	Closed
367	2023-04-12	Yes Same group reported on wildlife surveys	300 m -1 km	NA	34	Mixed group	31548932	Convoy	S	01- Behavior	34	26-50	367	1	0	Spring Migration	Closed
368	2023-04-10	No	100-300 m	101-200	5	Mixed group	31553241	Convoy	NA	01- Behavior	101	>100	368	1	0	Spring Migration	Closed
369	2023-04-15	Yes Same group as survey northbound	>1.5 km	NA	18	Mixed group	31558160	Normal	N	01- Behavior	18	25-Mar	369	0	0	Spring Migration	Closed
370	2023-04-15	Yes Same group as survey northbound	>1.5 km	NA	18	Mixed group	31558160	Normal	N	01- Behavior	18	25-Mar	370	0	0	Spring Migration	Closed
371	2023-04-14	No	300 m -1 km	NA	47	Mixed group	31561292	Convoy	S	01- Behavior	47	26-50	371	0	0	Spring Migration	Closed
372	2023-04-14	No	300 m -1 km	NA	2	Mixed group	31561293	Convoy	E	01- Behavior	47	26-50	372	0	0	Spring Migration	Closed
373	2023-04-14	No	300 m -1 km	NA	10	Mixed group	31561294	Normal	NA	01- Behavior	247	>100	373	0	0	Spring Migration	Closed
374	2023-04-15	No	300 m -1 km	NA	4	Mixed group	31568507	Normal	NA	01- Behavior	4	25-Mar	374	0	0	Spring Migration	Closed
375	2023-04-12	No	51-100 m	NA	80	Mixed group	31570231	Normal	NA	01- Behavior	433	>100	375	0	0	Spring Migration	Closed
376	2023-04-09	No	300 m -1 km	201-500	10	Mixed group	31570232	Convoy	E	01- Behavior	201	>100	376	1	0	Spring Migration	Closed
377	2023-04-10	Yes The environment team did a wildlife survey this morning and noted the 3 caribous at this exact location.	51-100 m	NA	3	Juveniles	31584092	Convoy	NA	01- Behavior	3	25-Mar	377	1	1	Spring Migration	Closed
378	2023-04-10	No	>1.5 km	NA	55	Mixed group	31584093	Normal	NA	01- Behavior	55	51-100	378	0	0	Spring Migration	Closed
379	2023-04-11	No	51-100 m	NA	47	Mixed group	31584094	Convoy	NA	01- Behavior	47	26-50	379	0	0	Spring Migration	Closed
380	2023-04-11	Yes We did a behaviour survey on them a few minutes before this one.	100-300 m	NA	48	Mixed group	31584095	Convoy	W	01- Behavior	48	26-50	380	0	0	Spring Migration	Closed
381	2023-04-14	No	300 m -1 km	NA	16	Mixed group	31584096	Convoy	W	01- Behavior	16	25-Mar	381	0	0	Spring Migration	Closed
382	2023-04-14	No	300 m -1 km	NA	16	Mixed group	31584097	Normal	NA	01- Behavior	16	25-Mar	382	0	0	Spring Migration	Closed
383	2023-04-14	No	300 m -1 km	101-200	6	Mixed group	31584098	Convoy	W	01- Behavior	101	>100	383	1	0	Spring Migration	Closed
384	2023-04-15	No	>1.5 km	NA	8	Mixed group	31590587	Normal	N	01- Behavior	8	25-Mar	384	0	0	Spring Migration	Closed
385	2023-04-16	No	300 m -1 km	NA	2	Mostly females	31591417	Normal	NA	01- Behavior	2	02-Jan	385	0	0	Spring Migration	Closed
386	2023-04-16	No	1 - 1.5 km	NA	1	Mixed group	31591418	Normal	N	01- Behavior	1	02-Jan	386	0	0	Spring Migration	Closed
387	2023-04-18	No	300 m -1 km	NA	102	Mixed group	31603281	Convoy	N	01- Behavior	102	>100	387	0	0	Spring Migration	Closed
388	2023-04-17	No	300 m -1 km	NA	31	Mixed group	31607822	Convoy	S	01- Behavior	31	26-50	388	0	NA	Spring Migration	Closed
389	2023-04-19	No	51-100 m	NA	2	Mostly males	31620087	Normal	E	01- Behavior	7	25-Mar	389	0	0	Spring Migration	Closed
390	2023-04-19	No	>1.5 km	NA	1	Mostly males	31620088	Normal	S	01- Behavior	3	25-Mar	390	0	0	Spring Migration	Closed
391	2023-04-30	No	100-300 m	NA	2	Mixed group	31712929	Normal	NA	01- Behavior	2	02-Jan	391	1	0	Spring Migration	Closed

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
392	2023-05-23	No	100-300 m	NA	2	Mixed group	31857444	Normal	S	01- Behavior	2	02-Jan	392	1	0	Spring Migration	Closed
393	2023-06-21	Yes Walking around airstrip for the past week	51-100 m	NA	4	Mixed group	32002681	Normal	NA	01- Behavior	4	25-Mar	393	1	0	Calving and Summer	Open
394	2023-10-24	No	100-300 m	NA	11	Mixed group	33181926	Normal	NA	01- Behavior	11	25-Mar	394	1	0	Fall Migration	Open
395	2023-10-22	No	100-300 m	NA	8	Mixed group	33183054	Normal	N	01- Behavior	8	25-Mar	395	1	0	Fall Migration	Open
396	2023-10-24	No	100-300 m	NA	2	Mixed group	33183055	Normal	NA	01- Behavior	2	02-Jan	396	1	0	Fall Migration	Open
397	2023-10-27	No	100-300 m	NA	26	Mixed group	33183056	Normal	N	01- Behavior	87	51-100	397	0	0	Fall Migration	Closed
398	2023-10-27	No	0-50 m	201-500	20	Mixed group	33183057	Normal	NA	01- Behavior	201	>100	398	0	0	Fall Migration	Closed
399	2023-10-27	No	0-50 m	201-500	25	Mixed group	33183058	Convoy	NA	01- Behavior	201	>100	399	0	0	Fall Migration	Closed
400	2023-10-28	No	300 m -1 km	NA	25	Mostly females with calves	33195601	Normal	E	01- Behavior	25	25-Mar	400	1	0	Fall Migration	Closed
401	2023-10-28	No	300 m -1 km	NA	20	Mixed group	33195602	Normal	W	01- Behavior	20	25-Mar	401	0	0	Fall Migration	Closed
402	2023-10-31	No	100-300 m	NA	19	Mixed group	33222678	Normal	N	01- Behavior	100	51-100	402	0	NA	Fall Migration	Closed
403	2023-11-02	No	100-300 m	NA	6	Mixed group	33223645	Normal	S	01- Behavior	6	25-Mar	403	0	0	Fall Migration	Closed
404	2023-11-02	No	0-50 m	NA	4	Mixed group	33223646	Normal	N	01- Behavior	4	25-Mar	404	0	0	Fall Migration	Closed
405	2023-10-29	No	300 m -1 km	NA	8	Mixed group	33234609	Normal	S	01- Behavior	8	25-Mar	405	1	0	Fall Migration	Open
406	2023-11-07	No	100-300 m	NA	100	Mixed group	33244159	Normal	NA	01- Behavior	276	>100	406	0	0	Fall Migration	Closed
407	2023-11-06	No	100-300 m	NA	2	Mostly males	33249244	Normal	S	01- Behavior	2	02-Jan	407	0	0	Fall Migration	Open
408	2023-11-09	No	300 m -1 km	NA	100	Mixed group	33264150	Normal	NA	01- Behavior	100	51-100	408	0	NA	Fall Migration	Closed
409	2023-11-12	No	300 m -1 km	NA	25	Mostly males	33285335	Normal	S	01- Behavior	100	51-100	409	0	0	Fall Migration	Closed
410	2023-11-08	No	51-100 m	NA	11	Mixed group	33290087	Normal	W	01- Behavior	200	>100	410	0	0	Fall Migration	Closed
411	2023-11-11	Yes Same group same location as yesterday	300 m -1 km	NA	3	Mixed group	33315326	Normal	E	01- Behavior	3	25-Mar	411	0	0	Fall Migration	Open
412	2023-11-11	Yes Same area as yesterday	1 - 1.5 km	NA	600	Mixed group	33315327	Normal	S	01- Behavior	600	>100	412	1	NA	Fall Migration	Closed
413	2023-11-11	No	300 m -1 km	NA	27	Mixed group	33315328	Normal	NA	01- Behavior	27	26-50	413	0	NA	Fall Migration	Closed
414	2023-11-01	No	100-300 m	NA	1	Mostly females	33315331	Normal	NA	01- Behavior	1	02-Jan	414	1	0	Fall Migration	Closed
415	2023-11-17	No	1 - 1.5 km	NA	50	Mixed group	33350455	Normal	W	01- Behavior	100	51-100	415	0	0	Fall Migration	Closed
416	2023-11-18	No	300 m -1 km	NA	25	Mixed group	33350456	Normal	NA	01- Behavior	150	>100	416	0	0	Fall Migration	Closed
417	2023-12-06	No	100-300 m	NA	5	Mixed group	33400083	Normal	N	01- Behavior	5	25-Mar	417	0	0	Fall Migration	Open
418	2023-12-06	No	1 - 1.5 km	NA	2	Mixed group	33400084	Normal	W	01- Behavior	2	02-Jan	418	0	0	Fall Migration	Open
419	2023-12-01	No	0-50 m	NA	4	Mixed group	33401116	Normal	S,W	01- Behavior	37	26-50	419	0	1	Fall Migration	Closed
420	2023-12-08	Yes Same group from road survey at KM18 2023-12-08	1 - 1.5 km	NA	13	Mixed group	33415168	Normal	NA	01- Behavior	13	25-Mar	420	0	0	Fall Migration	Closed
421	2023-12-12	Yes Same group as 12/12/2023	300 m -1 km	NA	12	Mixed group	33466361	Normal	NA	01- Behavior	12	25-Mar	421	0	0	Fall Migration	Open
422	2023-12-16	No	300 m -1 km	NA	1	Mostly males	33479489	Normal	S	01- Behavior	1	02-Jan	422	0	0	Fall Migration	Open
423	2023-12-17	No	1 - 1.5 km	NA	43	Mixed group	33489584	Normal	E	01- Behavior	43	26-50	423	0	0	Fall Migration	Open
424	2023-12-18	No	300 m -1 km	NA	187	Mixed group	33490415	Normal	N,E	01- Behavior	187	>100	424	0	0	Fall Migration	Open
425	2024-01-01	No	300 m -1 km	NA	60	Mixed group	33558568	Normal	NA	01- Behavior	70	51-100	425	0	0	Winter	Open
426	2024-01-02	No	300 m -1 km	NA	44	Mixed group	33562494	Normal	NA	01- Behavior	44	26-50	426	0	0	Winter	Open
427	2024-01-04	No	300 m -1 km	NA	25	Mixed group	33578467	Normal	N	01- Behavior	25	25-Mar	427	0	0	Winter	Open
428	2024-01-06	No	300 m -1 km	NA	27	Mixed group	33591543	Normal	E	01- Behavior	89	51-100	428	1	0	Winter	Open
429	2024-01-11	No	1 - 1.5 km	NA	43	Mixed group	33617272	Normal	N	01- Behavior	43	26-50	429	0	NA	Winter	Open
430	2024-02-10	No	100-300 m	NA	27	Mixed group	33750786	Normal	NA	01- Behavior	27	26-50	430	0	0	Winter	Open
431	2024-02-21	No	100-300 m	NA	0	Mostly females with calves	33801743	Normal	NA	01- Behavior	4	25-Mar	431	1	0	Winter	Open
432	2024-03-09	No	100-300 m	NA	12	Mixed group	33858474	Normal	W	01- Behavior	12	25-Mar	432	0	0	Spring Migration	Open
433	2024-04-06	No	51-100 m	NA	2	Mostly males	34087995	Normal	N	01- Behavior	22	25-Mar	433	1	0	Spring Migration	Open

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
434	2024-04-06	No	300 m -1 km	NA	9	Mostly females	34087996	Normal	NA	01- Behavior	9	25-Mar	434	1	0	Spring Migration	Open
435	2024-04-08	No	300 m -1 km	NA	45	Mixed group	34131459	Normal	S	01- Behavior	45	26-50	435	1	0	Spring Migration	Closed
436	2024-04-11	No	100-300 m	NA	49	Mostly females	34174930	Normal	NA	01- Behavior	56	51-100	436	0	0	Spring Migration	Closed
437	2024-04-15	No	100-300 m	NA	12	Mixed group	34223644	Normal	NA	01- Behavior	12	25-Mar	437	1	0	Spring Migration	Open
438	2024-04-16	No	300 m -1 km	NA	11	Mixed group	34245633	Normal	NA	01- Behavior	11	25-Mar	438	1	0	Spring Migration	Closed
439	2024-04-18	No	100-300 m	NA	3	Mostly males	34271978	Normal	NA	01- Behavior	3	25-Mar	439	1	0	Spring Migration	Closed
440	2024-04-18	No	1 - 1.5 km	NA	50	Mixed group	34271979	Normal	S	01- Behavior	97	51-100	440	1	0	Spring Migration	Closed
441	2024-04-19	Yes Same location as the previous group	>1.5 km	NA	10	Mixed group	34297387	Blast	N	01- Behavior	10	25-Mar	441	1	NA	Spring Migration	Closed
442	2024-04-23	No	100-300 m	NA	2	Mostly males	34361294	Normal	N	01- Behavior	2	02-Jan	442	1	0	Spring Migration	Open
443	2024-04-22	No	51-100 m	NA	2	Mostly males	34365768	Normal	W	01- Behavior	2	02-Jan	443	1	0	Spring Migration	Open
444	2024-04-22	No	100-300 m	NA	7	Mostly females	34382423	Normal	NA	01- Behavior	7	25-Mar	444	1	0	Spring Migration	Open
445	2024-04-25	No	51-100 m	NA	2	Juveniles	34392886	Normal	W	01- Behavior	2	02-Jan	445	1	0	Spring Migration	Open
446	2024-04-24	No	100-300 m	NA	2	Juveniles	34399309	Normal	NA	01- Behavior	2	02-Jan	446	1	0	Spring Migration	Open
447	2024-04-22	No	300 m -1 km	NA	144	Mixed group	34516929	Normal	W	01- Behavior	144	>100	447	0	0	Spring Migration	Closed
448	2024-04-22	No	300 m -1 km	NA	46	Mixed group	34523128	Normal	W	01- Behavior	46	26-50	448	0	0	Spring Migration	Closed
449	2024-04-23	No	300 m -1 km	NA	80	Mixed group	34526148	Normal	E	01- Behavior	80	51-100	449	0	0	Spring Migration	Closed
450	2024-04-25	No	51-100 m	NA	2	Mixed group	34532335	Normal	N	01- Behavior	2	02-Jan	450	0	1	Spring Migration	Closed
451	2024-04-19	No	300 m -1 km	NA	55	Mixed group	34534684	Normal	S	01- Behavior	55	51-100	451	0	0	Spring Migration	Closed
452	2024-04-19	Yes Because I just did a pre convoy monitoring on this group	300 m -1 km	NA	26	Mixed group	34535519	Convoy	E	01- Behavior	26	26-50	452	1	0	Spring Migration	Closed
453	2024-04-19	No	300 m -1 km	NA	6	Mixed group	34536352	Convoy	E	01- Behavior	6	25-Mar	453	0	0	Spring Migration	Closed
454	2024-05-05	No	300 m -1 km	NA	42	Mixed group	34544754	Normal	N	01- Behavior	42	26-50	454	0	0	Spring Migration	Closed
455	2024-04-23	No	300 m -1 km	201-500	10	Mixed group	34749679	Convoy	NA	01- Behavior	201	>100	455	1	0	Spring Migration	Closed
456	2024-04-23	No	300 m -1 km	NA	15	Mixed group	34749680	Convoy	W	01- Behavior	53	51-100	456	1	0	Spring Migration	Closed
457	2024-05-09	No	300 m -1 km	NA	2	Mixed group	34757541	Normal	NA	01- Behavior	2	02-Jan	457	0	0	Spring Migration	Closed
458	2024-05-12	Yes Group observed in road survey conducted earlier. Same group positioning	1 - 1.5 km	NA	32	Mixed group	34767836	Normal	S	01- Behavior	32	26-50	458	0	0	Spring Migration	Open
459	2024-05-09	No	300 m -1 km	NA	2	Mixed group	34773298	Normal	S	01- Behavior	2	02-Jan	459	0	0	Spring Migration	Closed
460	2024-05-08	No	100-300 m	NA	34	Mixed group	34775559	Normal	S,W	01- Behavior	34	26-50	460	0	0	Spring Migration	Closed
461	2024-05-09	No	100-300 m	NA	16	Mixed group	34824821	Convoy	NA	01- Behavior	17	25-Mar	461	1	0	Spring Migration	Closed
462	2024-06-25	No	100-300 m	NA	3	Mostly males	35004486	Blast	N	01- Behavior	3	25-Mar	462	0	0	Calving and Summer	Open
463	2024-07-05	Yes Same location and number of individual	0-50 m	NA	3	Mostly males	35064120	Blast	NA	01- Behavior	3	25-Mar	463	1	0	Calving and Summer	Open
464	2024-07-08	No	0-50 m	NA	2	Mostly males	35112915	Blast	NA	01- Behavior	2	02-Jan	464	1	0	Calving and Summer	Open
465	2024-05-09	No	100-300 m	NA	40	Mixed group	35158021	Normal	E	01- Behavior	40	26-50	465	0	NA	Spring Migration	Open
466	2024-07-26	No	0-50 m	NA	1	Mostly males	35227777	Blast	NA	01- Behavior	1	02-Jan	466	1	0	Calving and Summer	Open
467	2024-08-11	No	0-50 m	NA	1	Mostly males	35363175	Blast	N	01- Behavior	1	02-Jan	467	0	NA	Calving and Summer	Open
468	2024-09-30	No	100-300 m	NA	1	Mostly males	35773521	Blast	NA	01- Behavior	1	02-Jan	468	1	0	Fall Migration	Open
469	2024-10-05	No	1 - 1.5 km	NA	38	Mixed group	35813117	Normal	S	01- Behavior	38	26-50	469	1	0	Fall Migration	Open
470	2024-10-15	No	300 m -1 km	NA	12	Mixed group	35901529	Normal	N	01- Behavior	12	25-Mar	470	1	NA	Fall Migration	Closed

APPENDIX D: DATA FROM CARIBOU BEHAVIOUR SURVEYS, 2020 TO 2024

Survey Number	Date	Project Tolerant Info	Distance from Caribou to Road	Caribou Group Size Estimate	Size of Subset	Dominant Group Sex	Survey ID	Type Survey Caribou	Direction Travel Survey	Survey Type	Caribou Group Size Exact	Caribou Group Size Binned	Survey ID	Is Disturbance	Road Cross	Season	Road Open
471	2024-10-17	No	100-300 m	NA	89	Mixed group	35904350	Convoy	S	01- Behavior	148	>100	471	1	0	Fall Migration	Closed
472	2024-10-20	No	100-300 m	NA	41	Mixed group	35932269	Normal	NA	01- Behavior	41	26-50	472	1	0	Fall Migration	Open
473	2024-10-22	No	0-50 m	NA	3	Mixed group	35955971	Normal	W	01- Behavior	3	25-Mar	473	1	NA	Fall Migration	Open
474	2024-10-27	No	1 - 1.5 km	NA	94	Mixed group	36020737	Normal	NA	01- Behavior	94	51-100	474	0	0	Fall Migration	Closed
475	2024-10-27	No	1 - 1.5 km	NA	100	Mostly males	36021574	Normal	W	01- Behavior	100	51-100	475	0	1	Fall Migration	Closed
476	2024-10-28	No	100-300 m	NA	16	Mixed group	36032357	Normal	W	01- Behavior	16	25-Mar	476	0	0	Fall Migration	Closed
477	2024-10-31	No	100-300 m	NA	13	Mostly males	36054771	Normal	NA	01- Behavior	13	25-Mar	477	0	0	Fall Migration	Closed
478	2024-11-01	No	300 m -1 km	NA	7	Mixed group	36063711	Normal	N	01- Behavior	7	25-Mar	478	0	0	Fall Migration	Closed
479	2024-11-01	No	300 m -1 km	NA	2	Mostly males	36064540	Normal	N	01- Behavior	2	02-Jan	479	1	0	Fall Migration	Closed
480	2024-11-04	No	0-50 m	501-1000	200	Mixed group	36082898	Normal	N	01- Behavior	501	>100	480	0	1	Fall Migration	Closed
481	2024-11-05	No	1 - 1.5 km	NA	1	Mostly males	36086473	Normal	NA	01- Behavior	1	02-Jan	481	0	0	Fall Migration	Closed
482	2024-11-08	No	300 m -1 km	NA	14	Mixed group	36119298	Normal	N	01- Behavior	14	25-Mar	482	1	NA	Fall Migration	Closed
483	2024-11-22	No	300 m -1 km	NA	79	Mixed group	36203449	Normal	NA	01- Behavior	79	51-100	483	1	0	Fall Migration	Open
484	2024-11-24	No	300 m -1 km	NA	1	Mostly males	36215451	Normal	S	01- Behavior	1	02-Jan	484	0	0	Fall Migration	Open
485	2024-11-27	No	300 m -1 km	NA	47	Mixed group	36252138	Normal	S	01- Behavior	47	26-50	485	0	0	Fall Migration	Closed
486	2024-11-28	No	0-50 m	NA	14	Mixed group	36263535	Convoy	N	01- Behavior	14	25-Mar	486	0	0	Fall Migration	Closed
487	2024-11-28	No	100-300 m	NA	16	Mixed group	36264524	Convoy	N	01- Behavior	16	25-Mar	487	0	0	Fall Migration	Closed
488	2024-11-28	No	300 m -1 km	NA	25	Mixed group	36267356	Convoy	NA	01- Behavior	148	>100	488	0	0	Fall Migration	Closed
489	2024-11-29	No	300 m -1 km	NA	54	Mixed group	36281792	Convoy	NA	01- Behavior	54	51-100	489	1	0	Fall Migration	Closed
490	2024-10-26	No	1 - 1.5 km	NA	55	Mixed group	36385356	Normal	E	01- Behavior	55	51-100	490	0	0	Fall Migration	Closed
491	2024-12-11	No	1 - 1.5 km	NA	32	Mixed group	36431213	Normal	NA	01- Behavior	32	26-50	491	0	0	Fall Migration	Closed
492	2024-12-14	No	300 m -1 km	NA	20	Mixed group	36466093	Normal	NA	01- Behavior	20	25-Mar	492	0	0	Fall Migration	Closed
493	2024-12-17	No	1 - 1.5 km	NA	27	Mixed group	36503662	Normal	N	01- Behavior	27	26-50	493	0	0	Fall Migration	Closed
494	2024-12-23	No	100-300 m	NA	1	Mostly females	36544242	Normal	NA	01- Behavior	1	02-Jan	494	1	0	Fall Migration	Open

APPENDIX E PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY

FIGURE E-1 PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – 2020

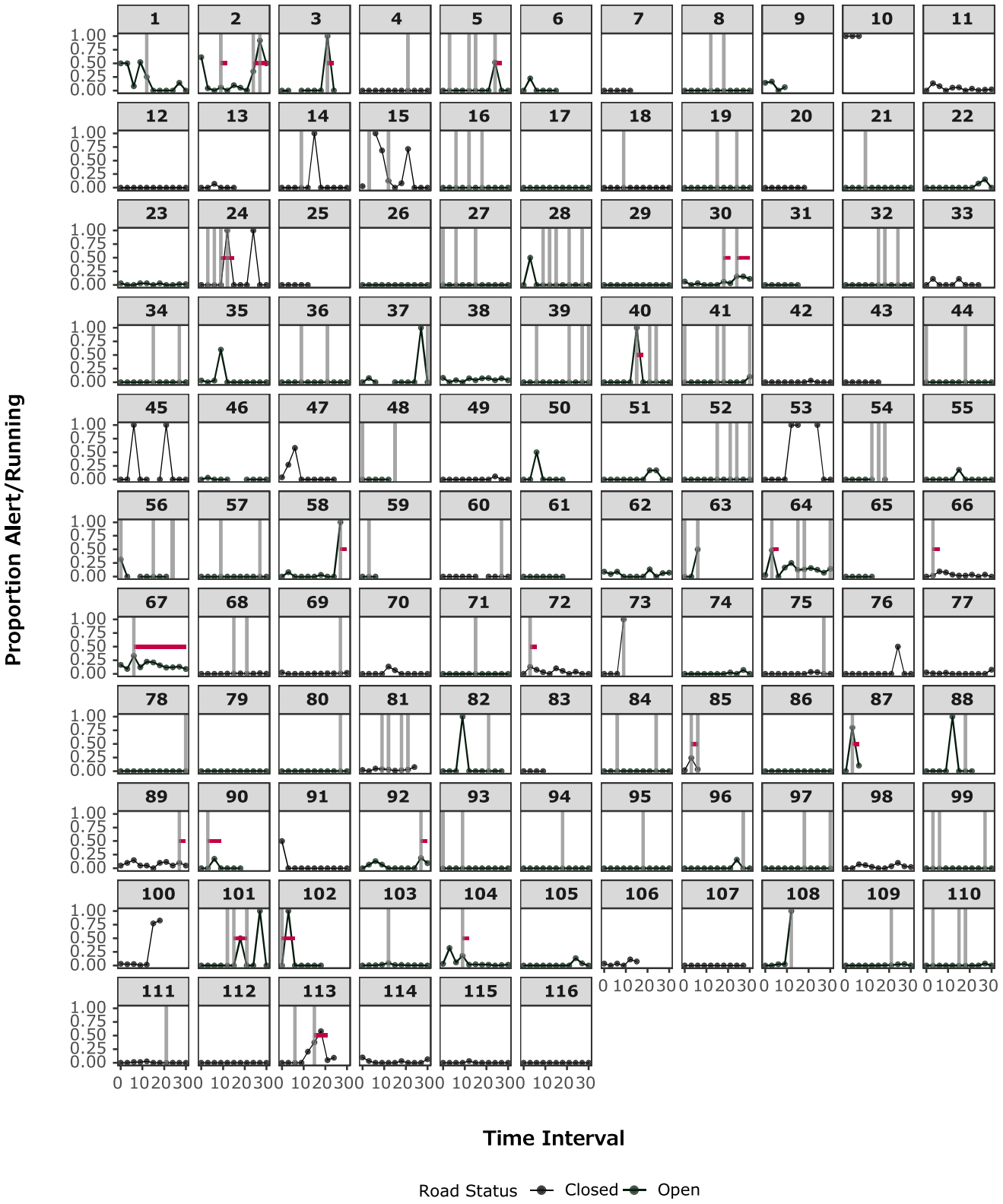


FIGURE E-2 PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – 2021

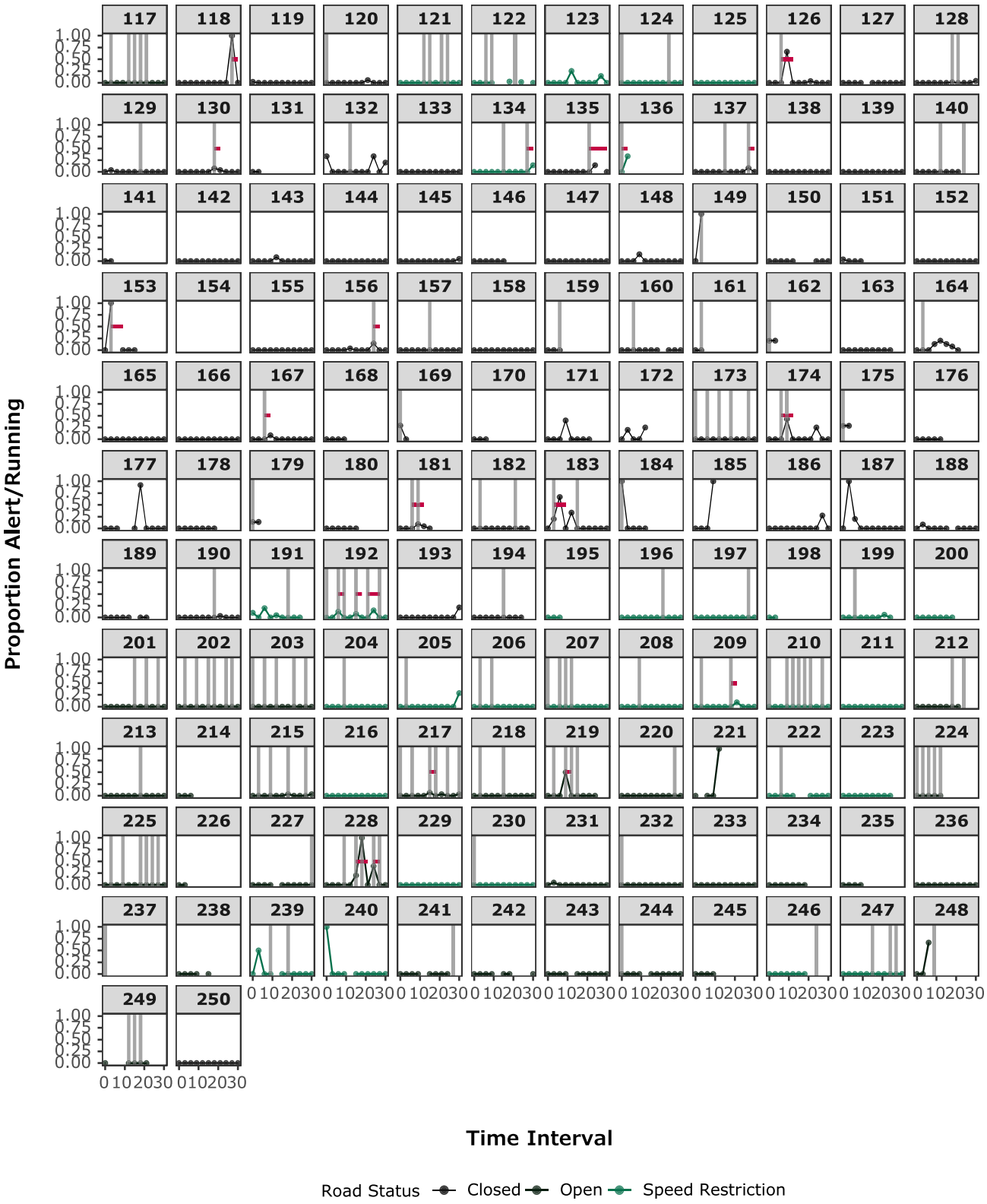


FIGURE E-3 PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – 2022

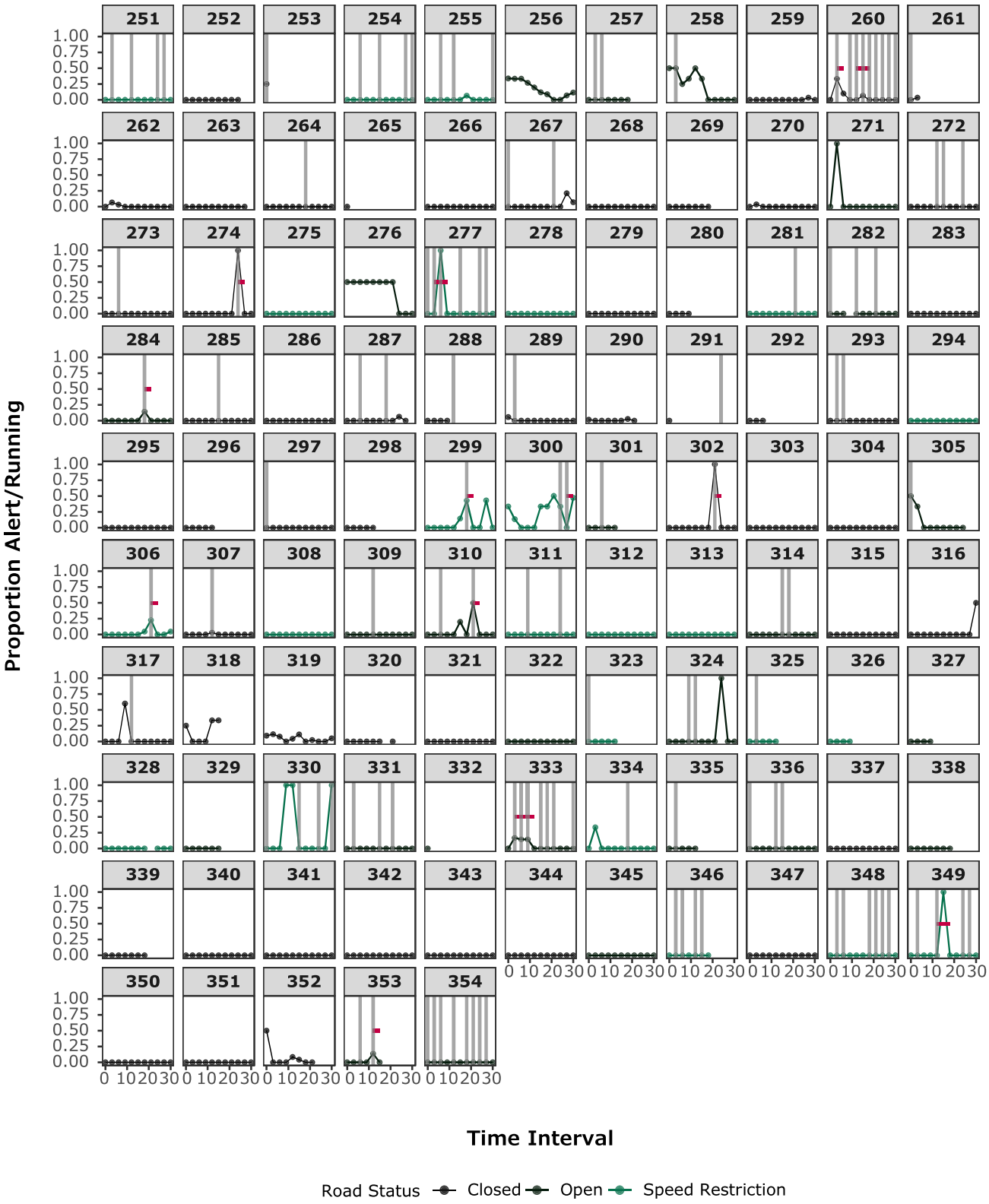


FIGURE E-4 PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – 2023

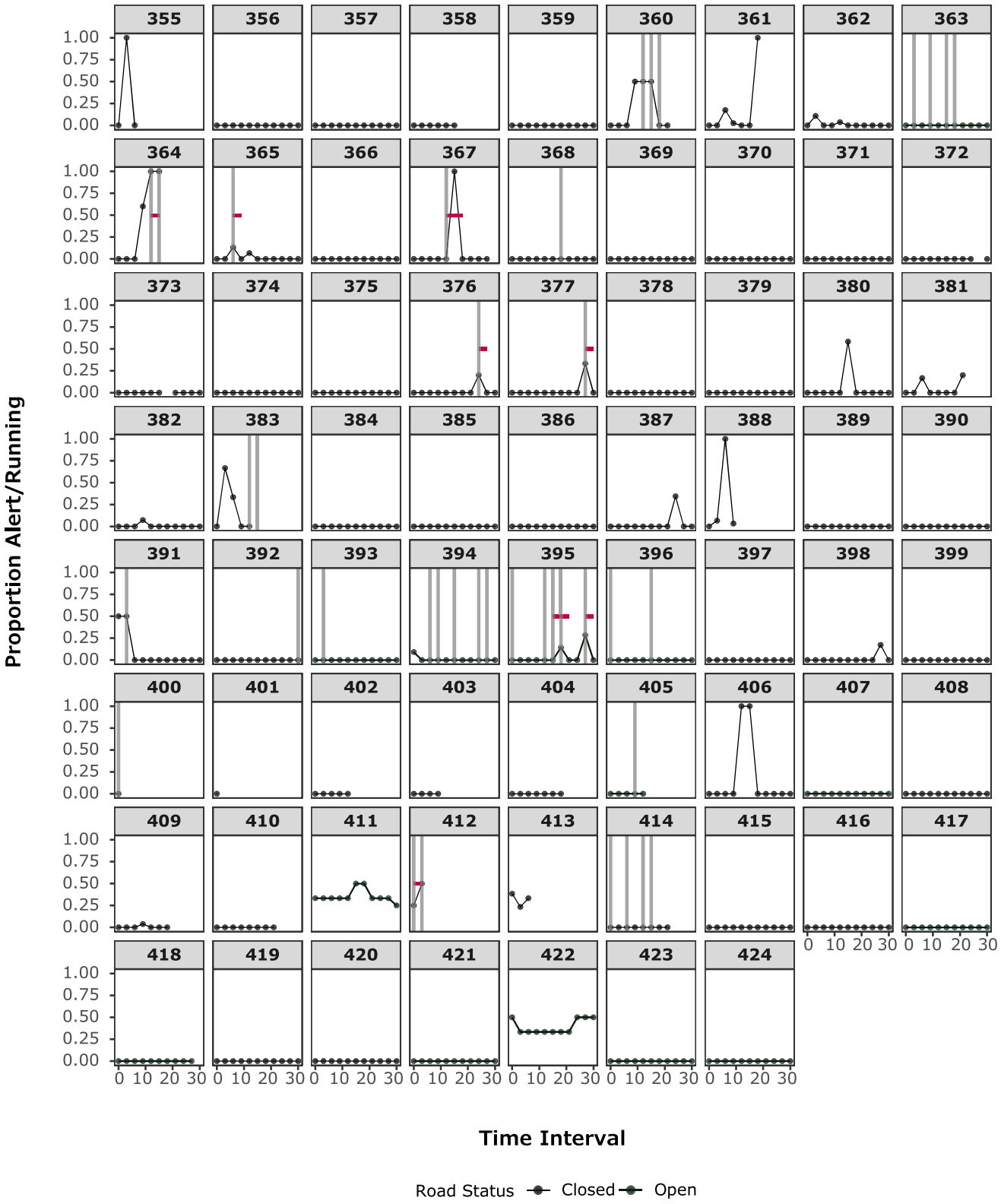
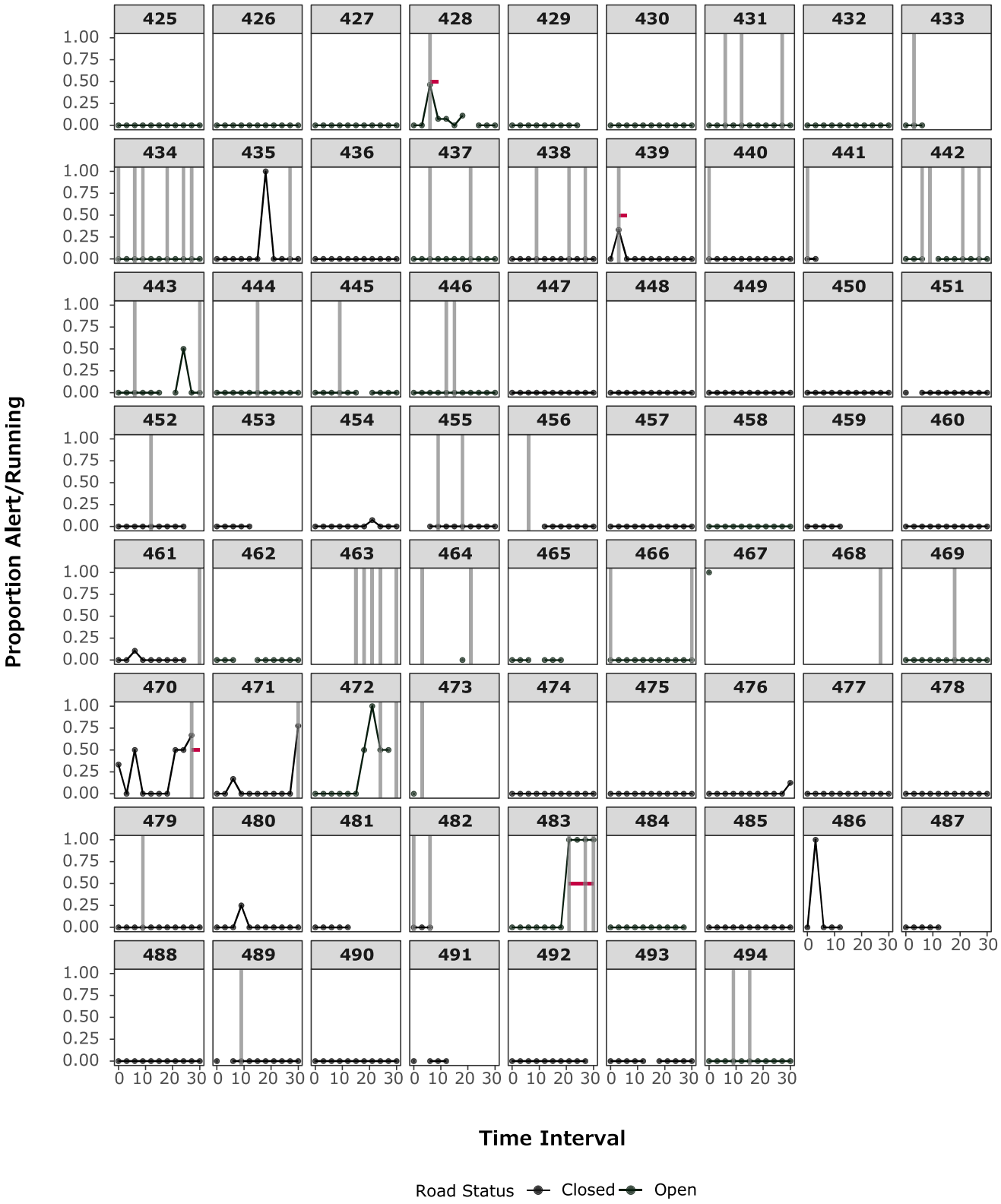


FIGURE E-5 PROPORTION OF RESPONSE BEHAVIOUR DURING EACH SURVEY – 2024



ERM HAS OVER 160 OFFICES ACROSS THE FOLLOWING COUNTRIES AND TERRITORIES WORLDWIDE

Argentina
Australia
Belgium
Brazil
Canada
China
Colombia
France
Germany
Ghana
Guyana
Hong Kong
India
Indonesia
Ireland
Italy
Japan
Kazakhstan
Kenya
Malaysia
Mexico
Mozambique
The Netherlands
New Zealand
Peru
Poland
Portugal
Romania
Senegal
Singapore
South Africa
South Korea
Spain
Switzerland
Taiwan
Tanzania
Thailand
UAE
UK
US
Vietnam

ERM's Vancouver Office

#1000 - 1100 Melville Street
Vancouver, BC
Canada V6E 4A6

T +1 604 689 9460
F +1 604 687 4277

www.erm.com

APPENDIX K

Fall Migration

TECHNICAL MEMORANDUM

DATE August 16, 2024 **Project No.** 22561569-TM-Rev0

TO Eric Haley
Agnico Eagle Mines Limited

CC Charity Beres, Corey De La Mare

FROM Jenny Foca, Dan Coulton **EMAIL Jennifer.Foca@wsp.com**

LEAD CARIBOU PROTECTION – FALL MIGRATION

1.0 INTRODUCTION

In 2023, Agnico Eagle provided the Terrestrial Advisory Group (TAG) with two separate exploratory analyses of spring collared caribou movements to support changes to road-related mitigation for the Meadowbank Mine and Whale Tail Project, including an updated analysis on the timing of migration (WSP 2023a) and another to characterize spring migration in terms of lead groups (WSP 2023b). During 2023, Agnico Eagle Mines Limited (Agnico Eagle) and the TAG proceeded with mitigation related to lead caribou triggers, which were piloted during spring migration 2024. Following review of the results from analyses of spring caribou movements at the November 2023 TAG meeting, the TAG requested similar analyses supporting lead caribou triggers during fall migration, which are contained in this technical memorandum.

For review, Inuit Qaujimajatuqangit (IQ) indicates that the main caribou herd typically follows the lead female caribou (“Qiviqait” in Inuktituk [Agnico Eagle 2020]) during migration. Scientific literature supports this knowledge as well with studies on caribou group composition indicating that pregnant females lead the spring migration, followed by males and non-pregnant females (Cameron and Whitten 1979, Nicholson et al. 2016). Groups of migrating caribou tend to be smaller during spring migration compared to fall migration and aggregations during other times of year (Cameron and Whitten 1979, WSP 2023abc); therefore, it is possible that lead caribou traveling through the Meadowbank study area may travel in smaller groups in advance of the main migrating herd and may not be exposed to closed roads because their group sizes do not meet the GST trigger.

Some initial work on the lead caribou concept was prepared by Agnico Eagle in 2020 (EDI 2020) and 2023 (WSP 2023b), which was then reviewed by the TAG and implemented as a pilot program (Agnico Eagle 2023). The objective of the lead caribou closure is different than that of the GST mitigation strategy, which aims to protect 75% of migrating caribou interactive with the project by closing road in response to large caribou group sizes. The objective of the lead caribou closure is to protect lead caribou and allow leaders to pass through with minimal disturbance based on IQ and that trailing caribou will follow leaders and continue to move through the Mine area. Potential outcomes of a lead caribou closure may include lead caribou groups moving through the study are faster, and the rest of the herd following suit and moving through the area more quickly which could potentially alleviate concerns about migration delays. Faster movements through the area would also shorten the time period during which animals interact with mine roads. This potential outcome is not guaranteed, and monitoring will be required during the pilot study to determine the feasibility and effectiveness of a lead caribou closure mitigation strategy.

Discussions during TAG meetings called for a review of fall migration patterns to understand how an implementation of a fall lead caribou closure pilot program may differ from a spring lead caribou closure (Agnico Eagle 2023), which prompted the present scope of work to characterize fall migration. Caribou group sizes and group compositions are different during fall migration compared to spring, and the two seasonal migrations have different biological drivers. For example, while spring migration is led by smaller groups of pregnant females traveling more rapidly and directionally to calving grounds, fall migration tends to have larger, mixed sex groups, and the fall migration period includes the rut and breeding in addition to migrating to winter ranges (Cameron and Whitten 1979, Nicholson et al. 2016). During fall, drivers include finding and accessing mates and foraging, which lead to slower and more tortuous movements (Johnson et al. 2002; Peterson and Weckerly 2018).

An exploratory analysis of collared caribou data for the fall migration was completed to further consider parameters related to the protection of lead caribou and/or with road mitigation. The objective of the exploratory analysis was to answer the following questions related to fall caribou migration:

- Is the number and distribution of caribou interacting with the Project similar across years?
- After the first caribou, what is the period of migrating caribou interacting with the Mine and roads?
- How correlated are road surveys and collared caribou data?
- What is the temporal distribution of caribou group sizes?
- Do migratory movements vary during daylight/nocturnal hours?

Collar data collected in 1993-2023 for Ahiak, Beverly, Lorillard, Qamanirjuaq, and Wager Bay herds, as well as collar data from animals not assigned to a herd (designated Northeast Mainland [NEM]) and Agnico Eagle road survey data (2018 to 2023) were evaluated quantitatively and visually to identify patterns related to these questions.

2.0 METHODS

All collar data for Ahiak, Beverly, Lorillard, Qamanirjuaq, Wager Bay, and NEM female caribou collected since April 1993 were compiled, resulting in a dataset of 1,837,225 collar fixes (telemetry locations). Data were compiled and analysed using R (R Core Team 2023). Of these, 30,534 fixes from the Beverly herd had low accuracy (position accuracy values of “0”, “1”, and “2” in the data) and were removed. In addition, 48,128 fixes were within 14 days from the first fix and were removed to reduce any effects of capture and collaring on the movement patterns (e.g., Dechen Quinn et al 2012; Wilson et al. 2016). Cases where two subsequent fixes were within less than 1 h from each other were removed to reduce positioning uncertainty (184,797 cases, of which 133,523 and 19,906 were from the Beverly herd and Qamanirjuaq herd data, respectively). Relocation time series of individual collars were examined to identify cases where collars fell off, resulting in stationary positioning data; a total of 14,797 of these cases were removed. This resulted in what was considered to be the clean dataset, with 1,558,969 fixes of 683 individual collars and 1,767 individual collar-years ranging from April 17, 1993 to December 31, 2023.

Data for the fall migration period, from September 1 to December 31 of each year (inclusive), were retained for analysis (Figure 1). To maximize temporal resolution, collared caribou with fixes greater than 24 hours apart were omitted from the analysis. To focus the analysis on the active fall migration period and to remove movements that are likely foraging, a speed cutoff of 0.149 km/h was used based on results reported by Nicholson et al. (2016). In addition, Beverly herd and Qamanirjuaq herd data were omitted from analysis because both herds showed minimal

interaction with the All-Weather Access Road (AWAR) and Whale Tail Haul Road (WTHR) during the fall migration period. Removal of these two herds removed all collar data for 2007 in which no collared caribou came within 320 km of the roads. This resulted in a dataset of 180,237 fixes of 179 individual collars and 352 individual collar-years, ranging from September 1, 2004 to December 31, 2023 (excluding 2007). The fall migration dataset was used to calculate turning angles, movement speed, the date of crossing the AWAR/WTHR roads, if applicable, and the minimum distance between the collars and any point on the AWAR/WTHR roads for every fix timestamp.

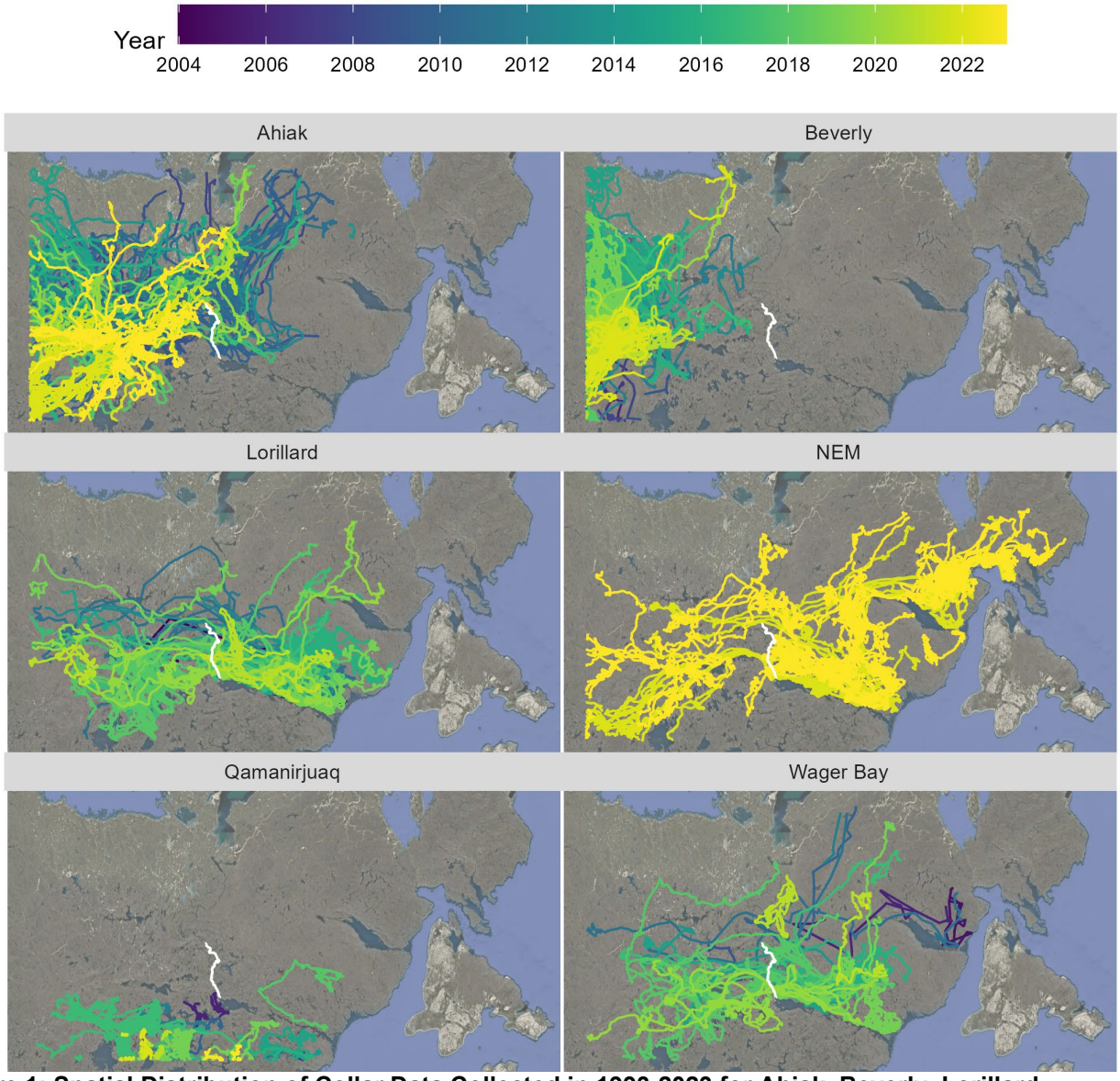


Figure 1: Spatial Distribution of Collar Data Collected in 1993-2023 for Ahiak, Beverly, Lorillard, Qamanirjuaq, and Wager Bay Herds, as well as Collar Data from Animals not assigned to a Herd (Designated Northeast Mainland [NEM]). The Haul Road and all-weather Access Road are Shown in White.

Relative turning angles from individual caribou trajectories were used to calculate percent movement east- or westward. Where relative turning angles were ±60° from the east direction, the movement was considered to be eastward. Where relative turning angles were ±60° from the west direction, the movement was considered to be westward. Similarly, angles ±30° from the north and south directions were considered northward and southward, respectively. The allocation of each movement to an overall direction allowed calculation of daily percent movement westward. A higher proportion of daily westward movements would indicate caribou performing their fall migration.

The number of days between the arrival of each collared caribou within 50 km of the roads and the arrival of the first caribou from road counts in that year was calculated to quantify the period of interaction. The 50 km cut-off value was selected to reflect an area around the Mine and the AWAR/WTHR roads large enough to capture locations of older collar fix rates of one fix per 24 hrs. Construction of the AWAR began in 2008 and the Mine began in 2009, with operations beginning in 2010. The Whale Tail site was constructed in 2018. The 50 km buffer was applied for all years of the study as a conservatism.

Road survey counts of caribou were compiled for survey years 2018-2023, where effort was higher than in previous survey years. These were used to calculate the total number of caribou recorded daily within 10 km of the road, which was then compared to the number of collars recorded within 10 km, 25 km, and 50 km from the road. In addition, the road survey counts were used to visualize caribou group sizes throughout the spring migration season.

Daily patterns of movement were analyzed using the calculated movement speed between every two position fixes. The data used for analysis of speed were restricted to fix rates of four hours or less and to survey years 2015-2023, since data collected prior to 2015 were too sparse for analysis. The timing of sunrise and sunset at each fix location was determined using the R package “suncalc” (Thieurmel and Elmarhraoui 2022); the period between 30 minutes prior to sunrise and 30 minutes following sunset was considered to be “light,” whereas the remaining time was considered to be “dark.” The dataset, of 77,204 fixes from 277 collars, were divided into four periods as follows: if the previous fix was during a dark period but the current fix was during light hours, the fix was considered to be “dawn.” If both previous fix and current fix were during light hours, the fix was assigned to “day.” If the previous fix was during light hours but the current fix was during dark, the fix was assigned to be “dusk.” Finally, if both the previous fix and current fix were during dark hours, the fix was assigned to “dark.” Due to this categorization, “day” fixes were limited in the month of December, due to the shortening of the Arctic day in the fall. All analyses were performed in R v. 4.3.2. (R 2023).

3.0 RESULTS

3.1 Telemetry Dataset

The number of collars and number of position fixes available for each year differed greatly between years. In early years, fix rates were generally low (e.g., every 24 hrs), resulting in few position fixes during the fall migration period (Table1). The number of collared caribou during the fall migration period ranged from 1 (in 2004) to 78 (in 2023). Six of the 19 years of data had fewer than 10 collars available during the fall migration period. In later years, as fix rates increased to four hours between fixes, the amount of data collected per collar increased up to six-fold compared to the earlier sampling years, resulting in more robust individual datasets.

Table1: Annual Numbers of Collars and Position Fixes During the Fall Migration Period

Year	N collars	N fixes	Percent collars within 10 km (%)	Percent fixes within 10 km (%)	Percent collars within 50 km (%)	Percent fixes within 50 km (%)
2004	1	19	0.0	0.0	100.0	5.3
2005	2	87	0.0	0.0	0.0	0.0
2006	1	40	0.0	0.0	0.0	0.0
2007	0	0	0.0	0.0	0.0	0.0
2008	7	508	0.0	0.0	42.9	3.5
2009	21	706	9.5	0.4	14.3	2.0
2010	15	1,707	26.7	1.6	66.7	9.9
2011	21	2,322	23.8	1.2	81.0	7.8
2012	14	1,313	28.6	2.4	64.3	10.9
2013	10	1,403	10.0	0.1	60.0	6.7
2014	9	2,579	22.2	1.9	33.3	8.2
2015	13	7,806	38.5	2.6	61.5	5.2
2016	24	14,985	41.7	1.4	50.0	8.8
2017	15	7,961	66.7	2.4	73.3	12.4
2018	31	21,758	74.2	3.8	74.2	15.0
2019	20	14,379	35.0	2.9	50.0	7.4
2020	16	10,291	56.3	1.0	68.8	11.6
2021	9	6,195	22.2	1.2	44.4	9.9
2022	45	30,670	37.8	0.7	53.3	4.1
2023	78	55,508	10.3	1.1	21.8	5.9

3.2 Fall Migration Movements

Western migratory movements of collared caribou varied by herd and year, with no apparent systematic trend through time (Figure 2). In some years, migratory movements were highly correlated among herds (2017, 2018, 2019), whereas in other years, they appear uncorrelated (2021, 2022). A lack of systematic migratory movements may be related to variation in the timing of rut, which occurs from mid-October to early-November among these herds (Caslys 2015). In many herds and years, peak western movements occur during rut but not always (2015, 2018). Alternatively, herd level differences could be related to each herd's parturition rate and calf survival, which occurs earlier than fall migration. For example, cows with newborn calves move more slowly because young calves are less mobile, so in years where parturition and calf survival are high, migratory movements may be shorter or delayed and require greater movements during the fall to reach winter ranges. Another factor may be local range conditions such as high availability of high quality forage, resulting in less incentive to search for it over larger spatial scales.

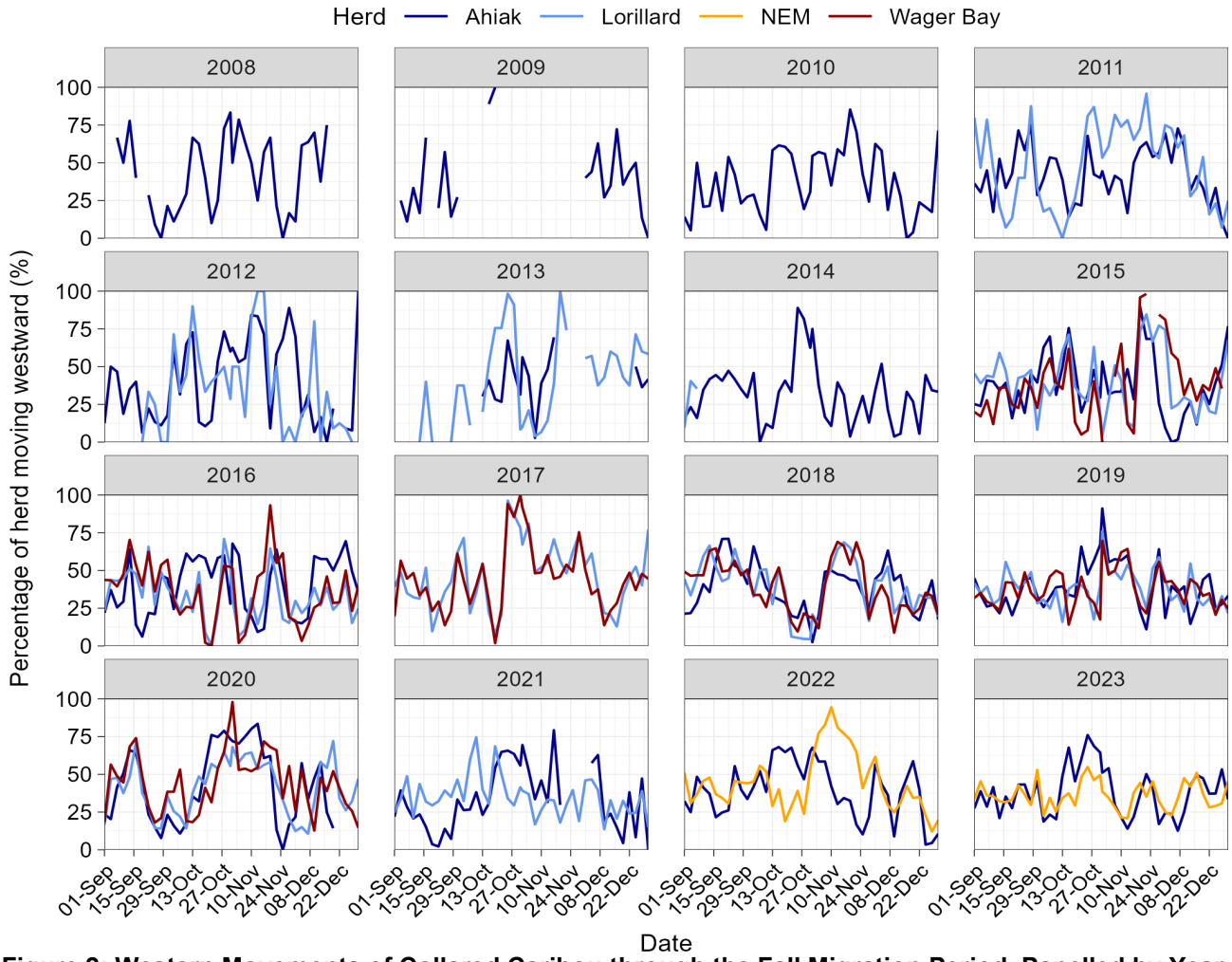


Figure 2: Western Movements of Collared Caribou through the Fall Migration Period, Panelled by Year.

3.3 Interaction with Mine and Roads Across Time

Out of the 20 survey years when higher resolution (i.e., fix rate <24 hours) data were available (2004-2023), collared caribou came within 10 km from the AWAR/WTHR roads during fall migration in 15 of the 20 years (2009- 2023; Table 1; Figure 3). That is, in 5 of the 20 survey years with higher resolution data (25%), none of the collared caribou were within 10 km from the AWAR/WTHR roads throughout the fall migration season. For the fall analysis, individuals from early survey years were excluded during data cleaning due to the lower resolution of data (1993-2004). Similar to spring, caribou fall migration demonstrated a pattern of increased proximity to the roads in later years.

Of the 179 collars available for the fall migration period, 74 collars (41%) were recorded at least once within 10 km of the AWAR/WTHR roads. The distribution differed between herds, ranging from 20% (11 collars) of Ahiak collars being recorded within 10 km from the roads to 73.7% and 87.5% of Lorillard and Wager Bay collars (28 and 14 collars, respectively). Close proximity (≤10 km) to the AWAR/WTHR roads was recorded throughout the entire migration period across years, from early dates (September 1, in 2015, 2016, 2017, and 2019, 2023) to late ones (December 31, in 2023; Figure 3). Overall, December had the lowest number of individuals in close proximity at 10, whereas September through November had similar numbers at 30, 39, and 46, respectively.

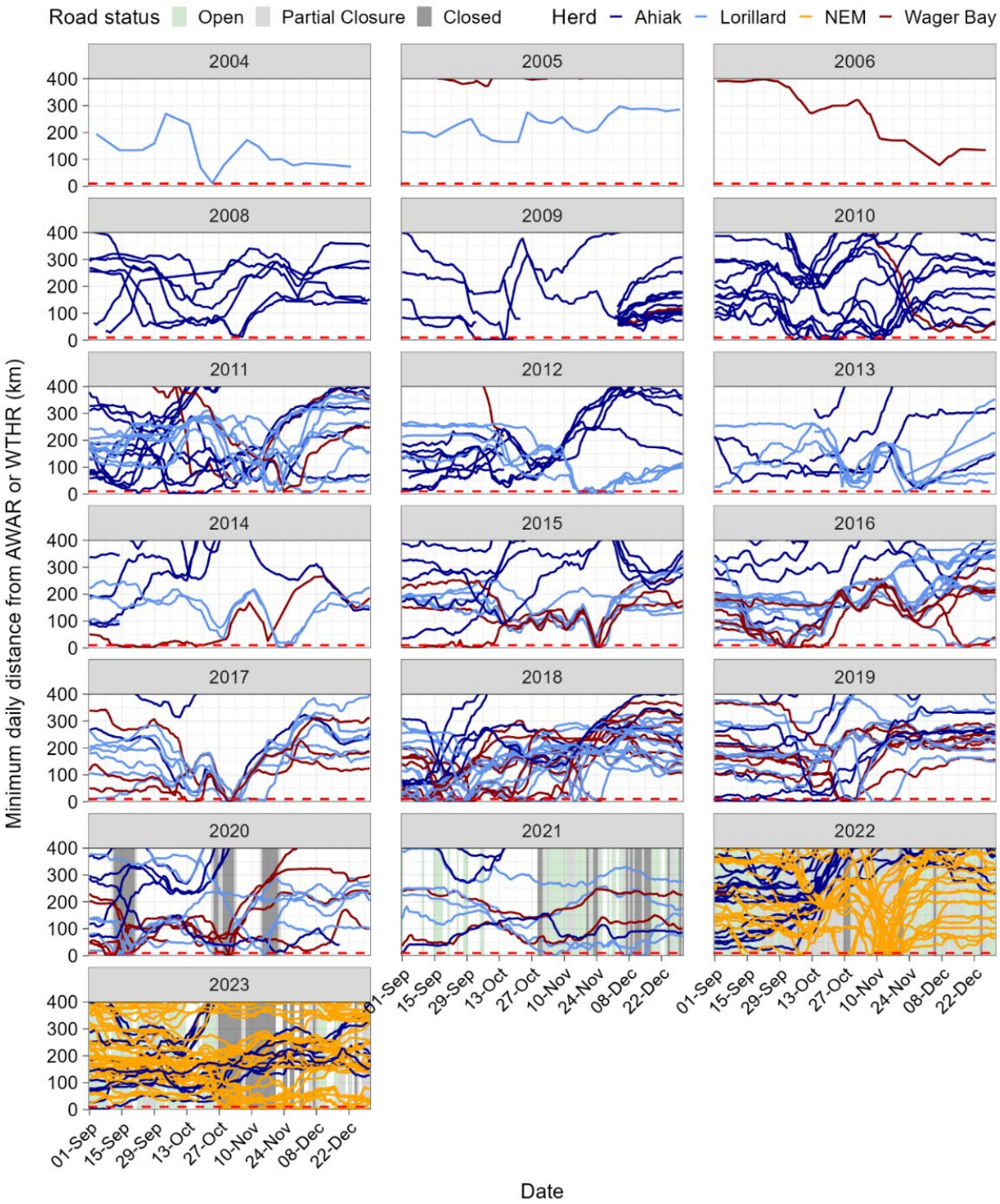


Figure 3: Time Series of Minimum Daily Distance of Individual Collared Caribou from the AWAR/WTHR Roads, Panelled by Year. The 10 km Cut-Off Value of Distance from the Road is Shown as a Dashed Red Line.

3.4 Mine and Road Interaction Period

The period of time between the arrival of the first collared caribou within 10 km of the roads and the arrival of each subsequent collared caribou within 10 km from the roads was calculated for each caribou-year (Figure 4). This interval ranged between 0 days (3 occurrences) and 106 days (1 occurrence) during fall migration. The most common range was 1 day (10 occurrences). NEM collars (not classified by herd) had longer periods of arrival (median value of 52.5) than Lorillard (median value of 10 days), and Ahiak (median value of 13.5 days; Figure 4), though this may be due to the fact that NEM collars may include caribou from different herds traveling during different time periods. Wager Bay had the shortest periods of arrival (median of 8 days). For all herds, the data were relatively limited, with only 6-23 collars and 4-10 survey years per herd. For Ahiak, Wager Bay, and Lorillard herds, approximately 75% of the collared caribou occurred within 10 km on the roads following the first caribou at 14, 20, and 33 days, respectively. For NEM caribou, approximately 75% of collared caribou were within 10 km of mine infrastructure within 61 days following the first collared caribou.

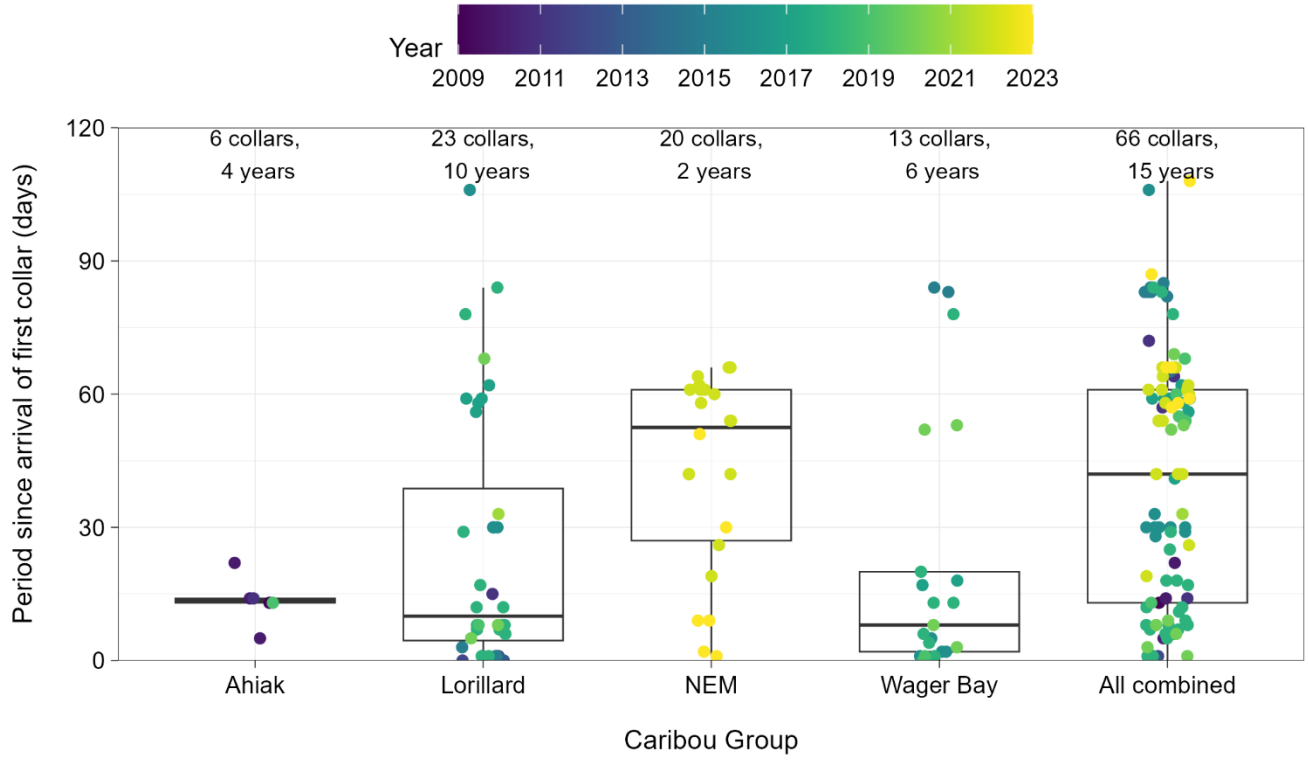


Figure 4: Period of Time Between the Arrival of Each Collared Caribou Within 10 km from the AWAR/WTHR Roads and the Arrival of the First Collared Caribou in that Year.

In most years, the seasonal increase in number of collared caribou within 10 km from the AWAR/WTHR roads was generally later than the increase in numbers recorded from road surveys (Figure 5). For example, in 2022, the road survey count was 36 on September 1 while the collar counts remained zero until September 13, when five collars were recorded within 10 km of the road. This was not always the case, in 2009 collar observations proceeded road observations by three days and in 2023, both road and collar observations began on September 1. The peaks of the count distribution based on road surveys were closer to the distribution based on collar data from up to 50 km from the AWAR/WTHR roads, but not in all years (Figure 5). This is likely related to the number of available collared caribou and that the Mine and AWAR/WTHR roads area is very small relative to

the ranges of the assessed herds. However, the relative magnitude of road survey observations by year does correspond to annual numbers of collared caribou at closer proximity to the AWAR/WTHR roads (Figure 3 and Figure 5). In other words, when more collared caribou are in close proximity to the AWAR/WTHR roads, higher numbers of caribou are observed during road surveys. Similar to the Spring migration, road and collared caribou observations are coarsely correlated, suggesting that the spatial representation is good.

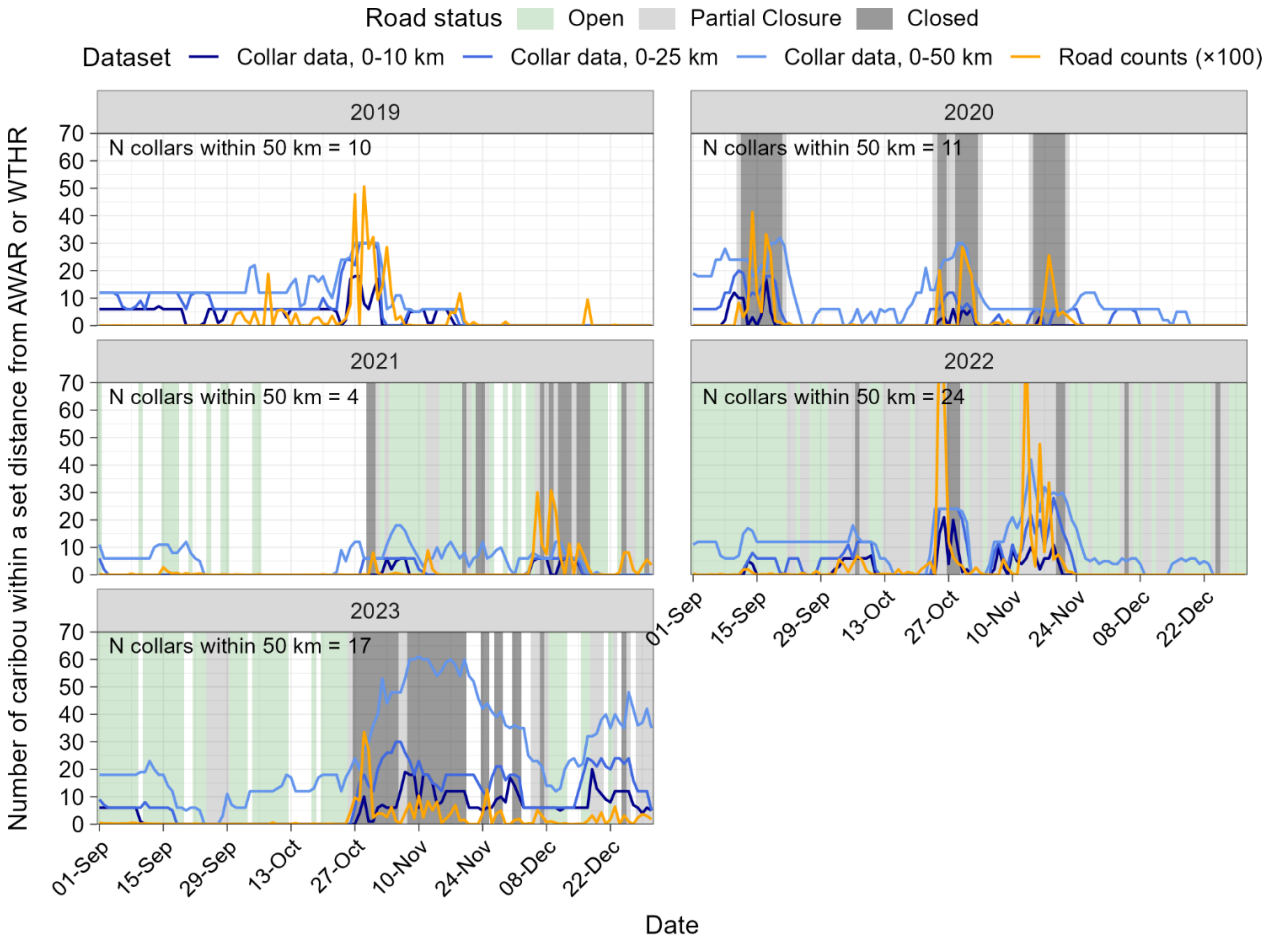


Figure 5: Time Series of Number of Caribou Within 10 km from the AWAR/WTHR Roads (Collared Caribou and Counts Based on Road Surveys), as well as Within 25 km and 50 km from the AWAR/WTHR Roads (Collared Caribou Only), Panelled by Year.

During some years, timing of migration appears to show a single migration wave, whereas in other years multiple waves may occur (Figure 5, e.g., 2020 and 2022). Road observations may be a more reliable method to detect multiple waves compared to collar data at present due to limited collar sample sizes; however, peaks are generally aligned between the two data sets. Differences between herds cannot be evaluated at this time due to the limited number of collars per herd per year within the collar dataset and the inability to distinguish between herds during road surveys. Considering only the years 2019 to 2023, the number of days between the first caribou and 75% of caribou occurring within 10 km of the road varied substantially between years, with single peak years showing a much shorter time frame for 75% of caribou to follow after lead caribou. On average, 75% of caribou came within 10 km of the roads within 23 days for single peak years (2019, 2021, and 2023) compared to an average of 57 days for years with multiple peaks (2020 and 2022).

3.5 Group Size Over Time

In three of the five years used for road survey data, daily median caribou group size peaked near the middle of the fall migration period, ranging from mid to late October (2022 and 2020) to November 1 (2023; Figure 6). In 2019, group sizes peaked in both October and December, whereas in 2021, group sizes peaked on December 16. With the exception of 2022, group sizes were small during September, with daily median values ranging from 1 caribou to 35 caribou and a median value of daily median group sizes of 3 caribou. When group sizes peaked midseason (2020, 2022, 2023), group sizes were small in December with daily median values ranging from 1 to 30 and a median value of daily median group sizes of 9.

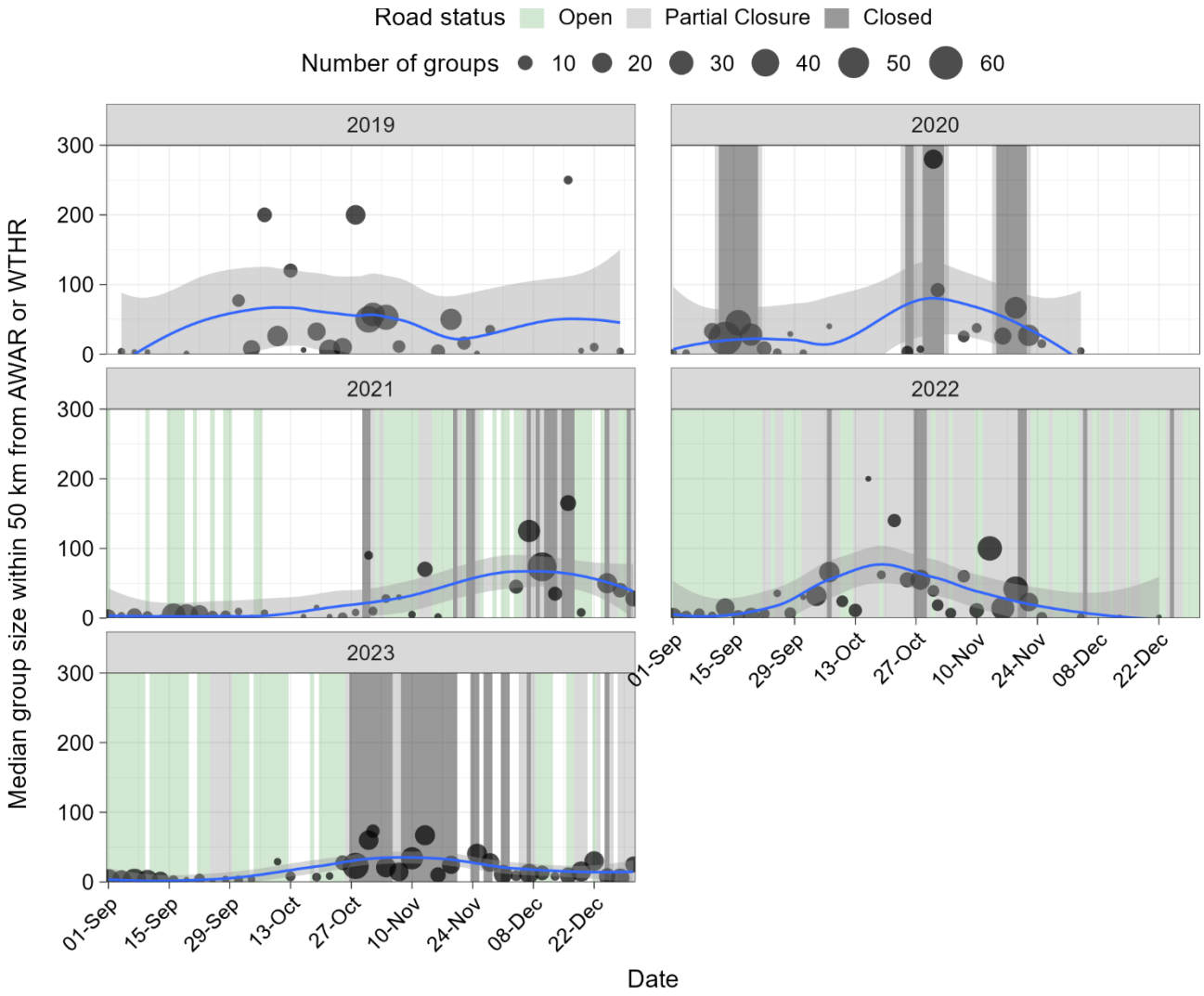


Figure 6: Median Daily Group Size Within 10 km from the AWAR/WTHR Roads Based on Road Surveys; the Blue Line Shows the LOESS Smoother (Locally Estimated Scatterplot Smoothing) to help Visualize the Temporal Trend.

3.6 Daily Patterns of Movement

The extent of annual data available ranged from 11 collars in 2015 to 76 collars in 2023 (Figure 7). During fall migration, the speed of collared caribou differed across times of the day with movement being slowest in the dawn with a mean of 0.28 km/h. Speeds were fastest during the day (mean speed of 0.54 km/h) and began to slow during the Dusk (mean = 0.52 km/h) and the Dark (mean = 0.38 km/h). This pattern was consistent in all herds, in all years, and at distances both greater than 50 km and less than 10 km from the roads. Across all years and herds, there were more collar fixes within 10 km of the road (as a percentage of all fixations that occurred during the day) at 2.2%. The percentages were lower for dawn (1.7%), dusk (1.6%), and the dark periods (1.5%).

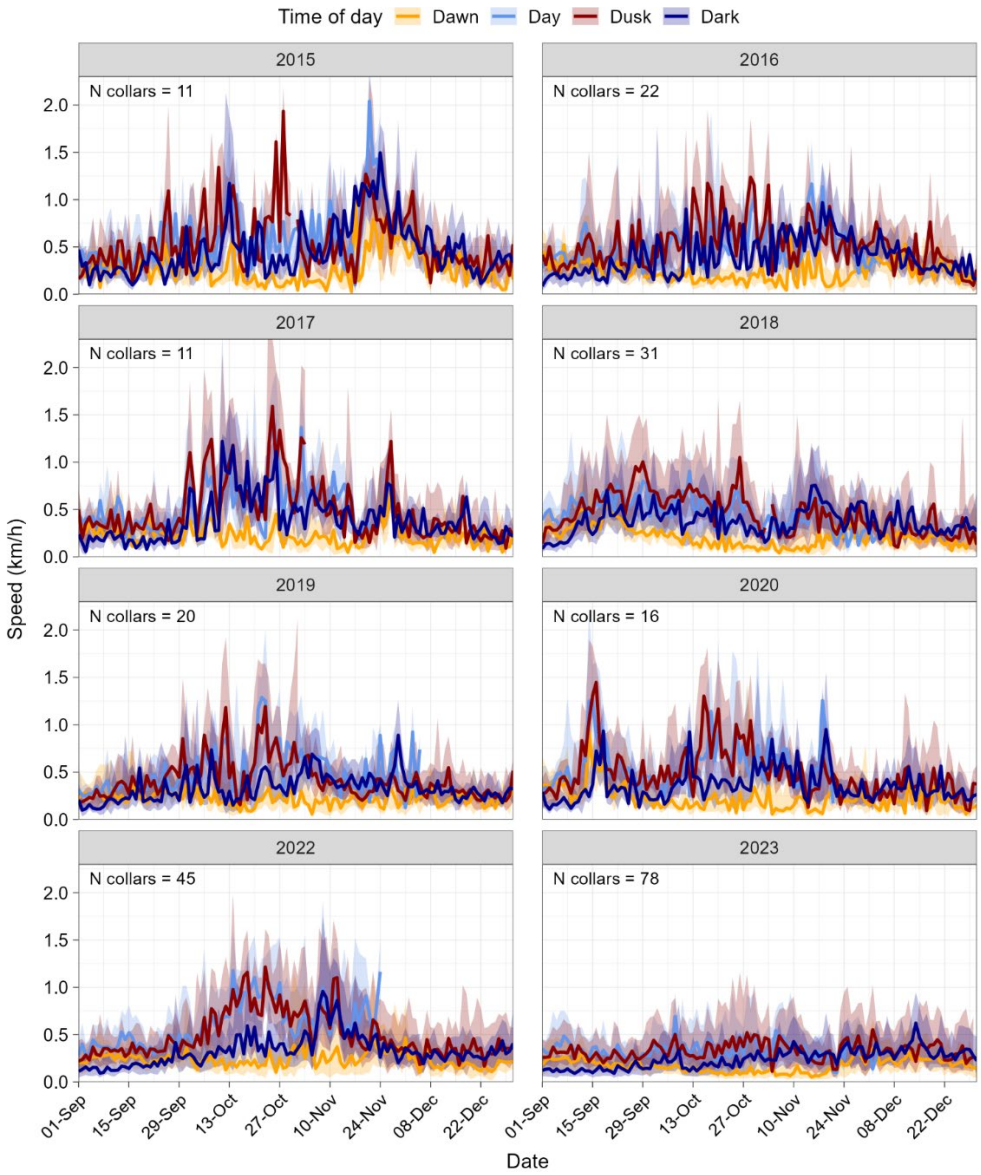


Figure 7: Median Daily Movement Speed (km/h, lines), Shown by Period of Day (Dawn, Day, Dusk, and Dark) and by Survey Year. Ribbons Represent the 25th and 75th Daily Percentile of Speed.

4.0 SUMMARY AND RECOMMENDATIONS

Both IQ holders and the KivIA have supported an alternative mitigation approach that focuses on the protection of lead caribou during migration, which was implemented for the first time during the spring migration of 2024. This approach is intended to allow lead caribou to encounter a closed road with enhanced protection in accordance with IQ and allows following caribou to encounter roads with minimal exposure to traffic (during a closure period, partial closures or between convoys). Patterns of fall migration differ from spring migration, which prompted a separate assessment to characterize fall migration.

Analyses of collar data by year showed that higher numbers of collared caribou travel within 50 km of the Mine and AWAR/WTHR roads during fall migration compared to spring migration (WSP 2023b). Since the Mine began operations in 2010, an average of 57% of collared caribou have typically been present within 50 km of the Mine and AWAR/WTHR during the fall migration period. These values will be conservative because the Whale Tail site was not constructed until 2018, so the 50 km buffer area used is larger than what was on the landscape during previous years. In some years, a larger proportion of the herds migrate in closer proximity to the Mine and AWAR/WTHR area, though the proportion varied substantially between years, ranging between 22%-81% of collared caribou during fall migration (2010-2023). Overall, the proportion of collared caribou interacting with roads during fall migration were higher than during spring migration (WSP 2023b).

The timing of fall migration was much more variable than spring migration (Figure 2), which aligns with previous work to characterize the timing of migration (WSP 2023a). Timing of migration movements west varied by herd and year with no apparent overall trend. In some years, migratory movements were highly correlated among herds (2017, 2018, 2019), whereas in other years, they appear uncorrelated (2021, 2022). Most of the collar data collected in recent years (2022 and 2023) are classified as NEM and are not yet associated with a specific herd, limiting further assessment of the effect of herd on timing and distribution of fall migrants. Contrary to predictions discussed during TAG meetings (Agnico Eagle 2023), two peaks were not consistently observed and one peak in migration was more commonly observed based on both collar and road survey data. Similar to spring migration (WSP 2023b), the timing of increased counts recorded from road surveys was overall consistent with the timing of increased numbers of collars occurring near the Mine and AWAR/WTHR area. Analysis of the migration period indicated that following the first collared caribou encountering the Mine and AWAR/WTHR roads area, subsequent collared caribou move through up to 106 days later. Across all herds, 75% of caribou occur within 10 km of the road by 61 days following the first collared caribou. The time interval between first caribou and 75% of caribou appears smaller in years with a single migration peak and larger during years with multiple migration peaks.

Across all years and herds, average movement speeds during fall migration tended to be highest during the day and dusk and lowest during the dawn. This contrasts spring migration movement speeds, which did not vary by time period (WSP 2023b). The lower movement speeds at dawn during fall migration could be taken into consideration when planning the timing of convoys and minimize the probability of wildlife-vehicle interactions; however, the dawn period is relatively short and involves lower light conditions. Considering low caribou movement time periods for convoys needs to be balanced with considerations for visibility and safety.

Trends in daily median group sizes from road survey data during fall migration varied by year and month. Median group sizes tended to be lowest in September, followed by December. Group sizes tended to be larger in October and November. In terms of the initial caribou groups observed, daily median group sizes varied across years and larger groups often followed the initial caribou later in the migratory season. The results of the analysis of daily

median group sizes also support that larger groups and more groups of caribou are observed in years when there is a greater degree of collared caribou occurring within 50 km and a greater degree of interaction with caribou populations (herds). Hence small group sizes that result in small GST values occur when the degree of interaction with caribou herds are low.

Overall, the fall migration period takes place over a longer period of time and is more variable compared to spring migration. The high variability of fall migration introduces additional challenges for implementation of a lead caribou approach for caribou protection measures and may be less likely to produce the intended mitigative results of a lead caribou migration closure compared to spring. Differences between herds and whether the timing of fall migration aligns between herd may explain some of the variation in fall migration patterns across years. Biological drivers, such as foraging and movements during the breeding season in addition to movements towards winter ranges (Cameron and Whitten 1979, Nicholson et al. 2016) are likely important influences increasing variability during the fall migration season.

Spring migration which is characterized by a steady migration wave for multiple herds over more easily defined time period still involves challenges for identification of lead migrants, and these challenges are exacerbated for the fall migration period which includes a less defined time period, potential for multiple waves (temporal distribution), different social interactions (variable group composition), and herds moving towards different overwintering grounds. Lead caribou groups during spring are composed of pregnant females, which is reflected in IQ and scientific literature and provides a relatively simple indicator for observers to look and trigger mitigation. Group composition may be more variable during early fall migration, meaning that different identifying lead caribou groups may be more complex and require different criteria during fall to trigger mitigation. Several topics require discussion by the TAG, including the effectiveness of the 2024 spring migration lead caribou closure, limitations and remaining questions for the spring pilot program, and considerations for fall migration. Objectives for a fall lead caribou pilot program need to be defined and mitigation triggers established (for example, criteria for identifying leaders based on group size and composition), if a fall lead caribou closure is to be implemented.

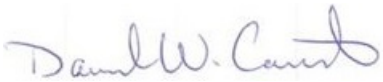
5.0 CLOSURE

We trust that this submission meets your current requirements. If you have any questions regarding the contents of this memorandum, please contact the undersigned.

WSP Canada Inc.



Jenny Foca, M.Sc.
Experienced Wildlife Biologist



Dan Coulton, Ph.D., RPBio
Principal, Senior Wildlife Biologist



Morgan Skinner, Ph.D candidate.
Quantitative Ecologist

JF/DC/MS/tt

https://wsponline.sharepoint.com/sites/gld-168561/project files/6 deliverables/lead caribou memo (fall)/03_final/22561569-tm-lead.caribou.fall.migration-rev0.docx

6.0 REFERENCES

Agnico Eagle (Agnico Eagle Mines Limited). 2020. Terrestrial Advisory Group Meeting No. 5 Minutes. October 20, 2020.

Agnico Eagle. 2023. Meadowbank Terrestrial Advisory Group Official Meeting No. 15 (Minutes). 47 p.

Cameron RD, Whitten KR. 1979. Seasonal movements and sexual segregation of caribou determined by aerial survey. J Wildlife Manage. 1979; 43:626–33.

Caslys (Caslys Consulting Ltd.). 2015. Barren-ground caribou analysis methods summary report. Prepared for the Government of Nunavut by Caslys Consulting Ltd. Saanichton, BC.

Dechen Quinn AC, Williams DM, Porter WF. 2012. Postcapture movement rates can inform data-censoring protocols for GPS-collared animals. Journal of Mammalogy 93:456-463.

EDI (Environmental Dynamic Inc.). 2020. Caribou Road Crossing Mitigation. Prepared for Agnico Eagle Mines Limited by Environmental Dynamic Inc. Whitehorse, YK.

Johnson CJ, Parker KL, Heard DC, Gillingham MP. 2002. Movement parameters of ungulates and scale-specific responses to the environment. Journal of Applied Ecology 71:225-2235.

Nicholson KL, Arthur SM, Horne JS, Garton EO, Del Vecchio PA. 2016. Modeling Caribou Movements: Seasonal Ranges and Migration Routes of the Central Arctic Herd. PLoS ONE 11(4): e0150333. https://doi.org/10.1371/journal.pone.0150333.

Peterson LM, Weckerly FW. 2018. Social behavior and changes in foraging behavior in a gregarious ungulate. Journal of Mammalogy 99: 1422-1429. doi:10.1093/jmammal/gyy129

R Core Team. 2023. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

Thieurmel B, Elmarhraoui A. 2022. suncalc: Compute Sun Position, Sunlight Phases, Moon Position and Lunar Phase_. R package version 0.5.1, <https://CRAN.R-project.org/package=suncalc>.

Wilson RR, Parrett LS, Joly K, Dau JR. 2016. Effects of roads on individual caribou movements during migration. Biological Conservation 195:2-8.

WSP (WSP Canada Inc.). 2023a. Updated Caribou Migration Timing with the Whale Tail Haul Road and All-weather Access Road. Prepared for Agnico Eagle Mines Limited by WSP. 22pp + 1 App.

WSP. 2023b. Lead Caribou Protection. Prepared for Agnico Eagle Mines Limited by WSP. 15pp.

WSP. 2023c. Meadowbank Complex 2023 Wildlife Monitoring Summary Report. 185 p + 11 Appendices.



wsp.com