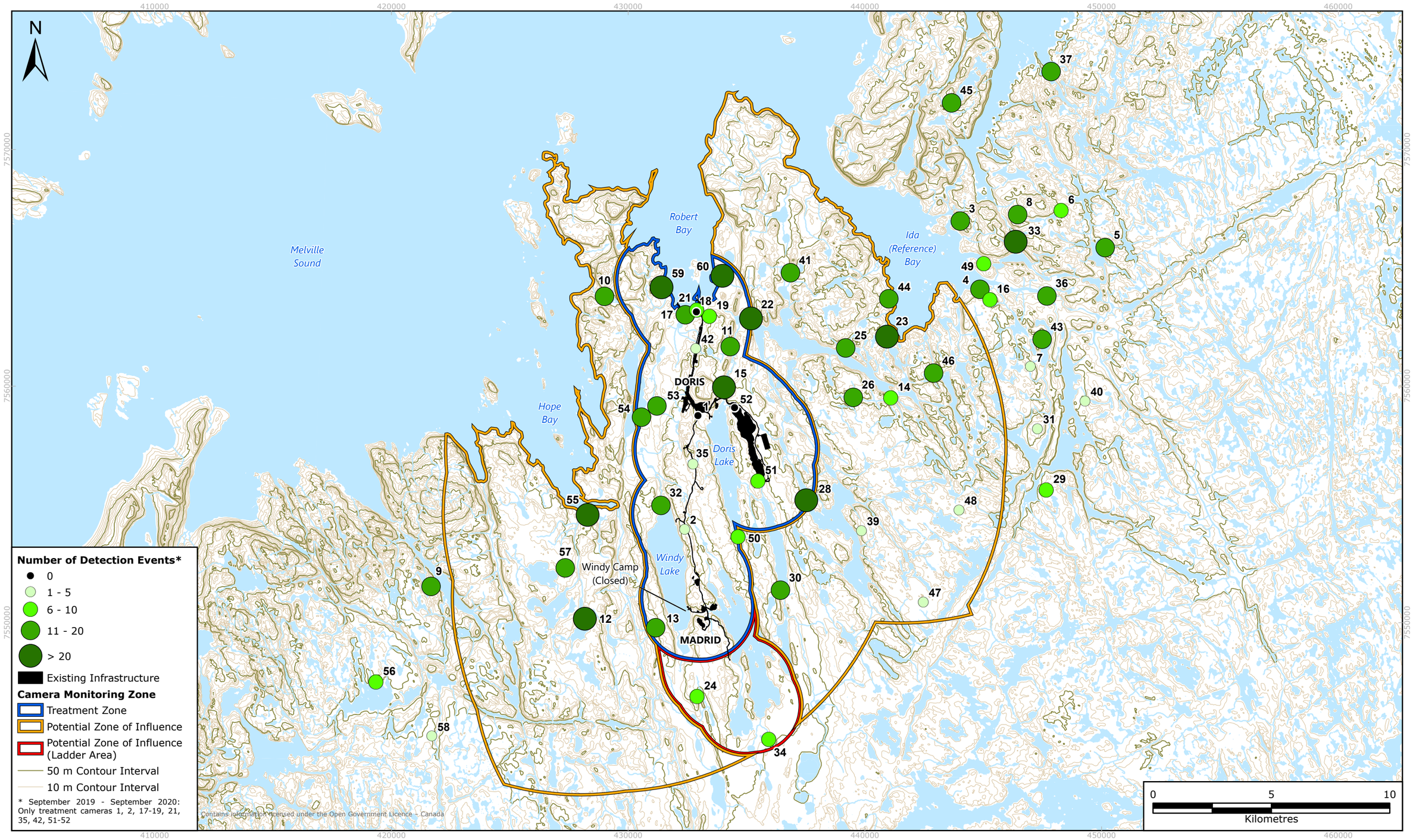
FIGURE 3.6-1 DETECTIONS OF GRIZZLY BEAR ON MOTION-TRIGGERED PHOTOS RECORDED BY REMOTE CAMERAS, DORIS AND MADRID AREAS, 2016 TO 2024

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### 3.6.3.2 INTERACTIONS, INCIDENTS, AND MORTALITIES

In 2024, four grizzly bear interactions occurred at the Mine (Appendix E). On October 11, 2024, two grizzly bears entered the core shack area. A bear banger and drone were used to deter the grizzly bears from the area. However, the grizzly bears remained in the area and were monitored before they moved toward camp for a second time. Bear bangers were used again, which moved the grizzly bears out of sight. On June 4, 2024, a grizzly bear was observed near drill 4, which required action to deter it away as it posed a safety risk to personnel. A helicopter was used to redirect the grizzly bear to a safe location. On July 5, 2024, a grizzly bear was observed at the Vent Raise and a drone was flown over during monitoring of the grizzly bear causing the grizzly bear to move away by approximately 20 m. Lastly, on June 7, 2024, employees servicing wildlife cameras in the Roberts Bay area were unable to return to their truck because a grizzly bear approached them. Another truck in the vicinity was able to prevent the bear from crossing the road, although the grizzly bear remained in the area until a helicopter safely deterred the bear to the west and the personnel were able to move to safety (Appendix E).

### 3.6.3.3 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2024, grizzly bears were recorded on 53 occasions on the wildlife sighting log. Grizzly bear observations from the wildlife sightings log were corrected for the number of people onsite each month from 2009 to 2024 (Appendix O). Across years, grizzly bear sightings peak in July and August. However, in 2023, grizzly bear sightings peaked in September, with the highest proportion of grizzly bears per onsite personnel since data collection begin in 2009 (0.31 grizzly bear recorded per personnel). In 2024, the highest proportion of grizzly bear per onsite personnel was recorded in August at 0.16, similar to trends in previous years (Appendix O; Table 3.6-2; Appendix F).

TABLE 3.6-2 GRIZZLY BEAR SIGHTINGS AND INCIDENTAL OBSERVATIONS, 2024

| General Location | Months | Total Sightings | Total Individuals[a] |
|---|---|---|---|
| Doris Area | June–October | 11 | 16 |
| Roberts Bay | May–October | 13 | 19 |
| Windy Road/Madrid | April–September | 25 | 41 |
| TLR/TIA | July–August | 4 | 5 |

Notes:
TIA = Tailings Impoundment Area; TLR = Tail Lake Road
[a] The total number of individuals provided may not always be representative of the true number of individuals recorded, as certain wildlife sightings may include double counting of the same individual(s).

Sightings occurred between April and October, with the majority of events recorded in August (Appendix F). The latest sighting occurred on October 10, 2024 (Appendix F). Most of the sightings were of either a single bear or two bears (Appendix F). Four sightings were recorded near the TIA/TLR; however, no bears were noted interacting with the tailings. No grizzly bears were incidentally observed by biologists in 2024 (Appendix G).

## 3.7 WOLVERINE

The wolverine is considered a species of Special Concern under COSEWIC and SARA (Government of Canada 2025). Additionally, wolverine is listed as Vulnerable in Nunavut (NatureServe 2025). The geographic range of the wolverine includes the West Kitimeot region of Nunavut (TMAC 2017). Due to the reliance of wolverine on caribou as their main food source, the distribution and abundance of wolverine is affected by trends in caribou populations (Banci and Spicker 2016).

### 3.7.1 FEIS PREDICTIONS

The residual effects of the disruption of movement and attraction in the PDA were predicted to be not significant and low magnitude for wolverine in the Madrid-Boston FEIS (TMAC 2017).

### 3.7.2 METHODS

The potential effects of Mine-related activities on wolverine are monitored through the wildlife camera monitoring program (see general wildlife camera methods in Section 3.2.1) as well as through the Wildlife Sightings/Reporting program. Camera data are statistically analyzed every 3 years to investigate for potential differences in the occurrence of wolverine within the Treatment zone, Control zone, and ZOI areas.

### 3.7.3 RESULTS AND DISCUSSION

#### 3.7.3.1 CAMERA MONITORING

Between September 1, 2023, and August 31, 2024, 60 cameras were active for 7,818 days, averaging 130 active days per camera. Camera effort within monitoring zones for the most recent year is summarized by month in Table 3.3-2; effort summaries per camera are provided in Appendix P. A summary of the images and wolverine events recorded across all cameras during the current periods is provided below. Data from cameras 18, 21, and 22 with specific monitoring objectives are also included in the summary below.

Two events were recorded between September 1, 2023, and September 1, 2024 (Table 3.7-1). A total of 118 events were recorded of wolverine between 2016 and 2024 (Figure 3.1-1; Appendix P). Both wolverine events were captured on October 1, 2023, on the same camera. Both events occurred in the Control zone and were comprised of a single adult. Wolverine events were lower than previous years, with 11 events occurring from September 2022 to September 2023. However, the two events that occurred in 2024 were in the Control zone, which is where the majority of historical observations occurred (Figure 3.7-1).

**Facilities Camera Monitoring**

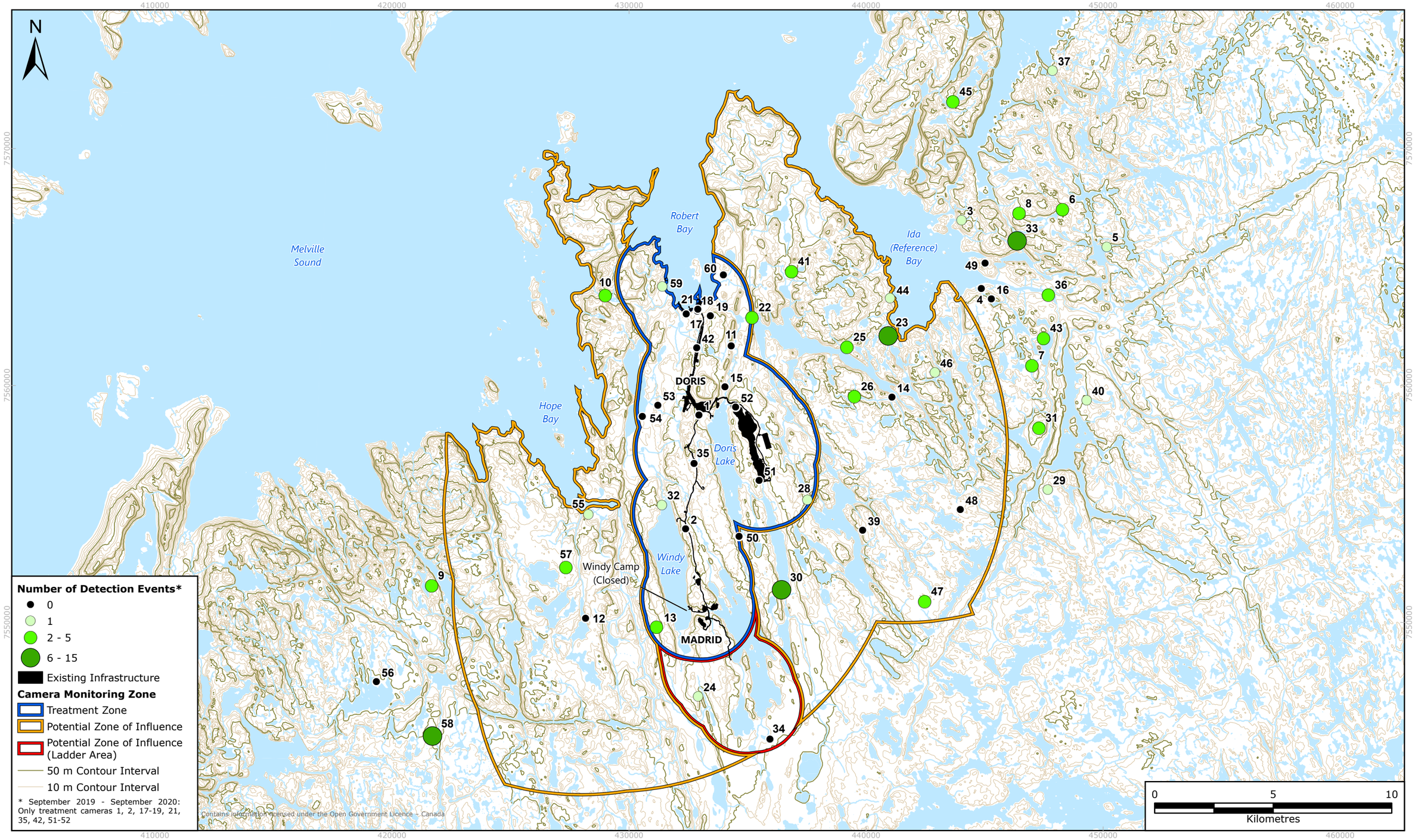
Under the current camera design, five cameras have a site-specific monitoring objective for wolverine (the same cameras with site-specific monitoring objectives for grizzly bear): camera 18 and camera 21 at the Roberts Bay Waste Management Facility, camera 22 at the Roberts Lake Outflow / Fish Fence, and cameras 51 and 52 at the north and south end of the TIA. No wolverine events were recorded on facility cameras between September 1, 2023, and August 31, 2024.

## TABLE 3.7-1 WOLVERINE EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Year | Month | Treatment | | ZOI | | Control | |
|---|---|---|---|---|---|---|---|
| | | Camera Effort[a] Total Active Days | Number of Events | Camera Effort[a] Total Active Days | Number of Events | Camera Effort[a] Total Active Days | Number of Events |
| 2023 | September | 444 | - | 258 | - | 386 | - |
| | October | 297 | - | 156 | - | 212 | 2 |
| | November | 202 | - | 80 | - | 39 | - |
| | December | 142 | - | 59 | - | 44 | - |
| 2024 | January | 128 | - | 47 | - | 110 | - |
| | February | 159 | - | 56 | - | 121 | - |
| | March | 174 | - | 87 | - | 114 | - |
| | April | 138 | - | 75 | - | 151 | - |
| | May | 120 | - | 80 | - | 107 | - |
| | June | 416 | - | 368 | - | 294 | - |
| | July | 534 | - | 434 | - | 324 | - |
| | August | 483 | - | 314 | - | 200 | - |
| **Total** | | **3237** | **0** | **1781** | **0** | **2102** | **2** |

Notes:
- = No wolverine detected
ZOI = Zone of Influence
[a] A total of 60 cameras were deployed across the Treatment, ZOI, and Control zones.

FIGURE 3.7-1 DETECTIONS OF WOLVERINE ON MOTION-TRIGGERED PHOTOS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, 2016 TO 2024

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DATE: 04/04/2025

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#### 3.7.3.2 INTERACTIONS, INCIDENTS, AND MORTALITIES

No wolverine interactions, incidents, or mortalities were recorded in 2024 (Appendix E).

#### 3.7.3.3 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2024, wolverines were recorded on three occasions on the wildlife sighting log (Table 3.7-2; Appendix F). No wolverines were incidentally observed by biologists in 2024 (Appendix G).

TABLE 3.7-2 WOLVERINE SIGHTINGS AND INCIDENTAL OBSERVATIONS, 2024

| General Location | Months | Total Sightings | Total Individuals[a] |
|---|---|---|---|
| Doris Area | March | 1 | 1 |
| Windy Road / Madrid | January and October | 2 | 2 |

Note:
[a] The total number of individuals provided may not always be representative of the true number of individuals recorded, as certain wildlife sightings may include double counting of the same individual(s).

Wolverines have been recorded variably across years, with sightings most commonly occurring in winter and spring (Appendix F). Very few individual wolverines are typically seen in a given year compared to other large mammal VECs (see Sections 3.4 to 3.6).

## 3.8 NEST PREDATORS

Nest predators include omnivorous or carnivorous species that frequently depredate bird nests. In the Mine area, this includes Common Ravens (*Corvus corax*), Arctic fox (*Vulpes lagopus*), red fox (*Vulpes vulpes*), grey wolf (*Canis lupus*), gulls (*Laridae* sp.), and small-bodied mammals, such as weasels (*Mustilidae* sp.). Nest predator monitoring was initiated due to concerns that the Mine may attract nest predators and have a potential impact on upland breeding bird nests. Nest predators are monitored through the wildlife camera monitoring program and the incidental wildlife observations program. However, monitoring has not indicated any attraction of nest predators to the Mine area (ERM 2024). Across years, nest predators are typically equally common across all camera zones. Additionally, the Madrid-Boston FEIS did not predict any effects related to nest predators; neither Project Certificate No. 003 nor Project Certificate No. 009 have any commitments related to nest predators. Therefore, the nest predator monitoring program has been discontinued in 2024, after discussion of the program results at the 2024 IEAC meeting. This program discontinuation will be included in the updated WMMP.

## 3.9 UPLAND BREEDING BIRDS

Upland breeding birds considered in the WMMP consist of passerines, shorebirds, and ptarmigans. In 2021, the upland bird program for the purposes of measuring effects of the Mine on birds and bird habitat was officially discontinued, as discussed in the WMMP (Agnico Eagle 2023). Currently, upland bird monitoring for the Mine is included in the following two programs, which were both completed in 2024:

- Program for Regional and International Shorebird Monitoring (PRISM) Surveys: an upland bird monitoring program specific to identifying breeding birds within tundra ecosystems that contributes to the PRISM program for the Canadian Arctic led by CWS, as described in the WMMP (Agnico Eagle 2023).
- TIA upland bird monitoring: an upland bird monitoring program completed every 2 years to monitor bird use of the habitat around the TIA (Agnico Eagle 2023).

### 3.9.1 FEIS PREDICTIONS

There were two potential residual effects for upland breeding birds—disturbance and mortality—in the Madrid-Boston FEIS predictions. These were assessed as a nonsignificant, negligible magnitude effect of disturbance in the Madrid-Boston LSA, and a nonsignificant, low magnitude effect of direct mortality in the PDA (TMAC 2017). Regardless, upland breeding bird monitoring occurs at the TIA and the associated Control site of Ogama Lake (Project Certificate No. 009 Term and Condition 26; NIRB 2018).

### 3.9.2 METHODS

In 2024, upland breeding birds were monitored through the wildlife interactions, incidents, and mortalities program, and the incidental sightings program. General methods for these programs are described in Section 3.2 and detailed findings are available in Appendices E to G. In addition, the 2024 upland bird program for the Mine includes the regional PRISM monitoring and TIA upland bird monitoring that are described below.

#### 3.9.2.1 REGIONAL PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING

In 2024, regional PRISM surveys following the CWS PRISM protocol (CWS 2024) were completed. PRISM surveys were completed from mid-June to early July to correspond with the upland bird nesting season. PRISM survey plots were 300 m by 400 m in size (12 ha) and the CWS provided location coordinates. Each PRISM plot is given a priority level by the CWS based on the temporal urgency to survey the plot: high, medium, and low. Plots were accessed by helicopter, with landing locations spaced at least 200 m from the plot boundaries to minimize disturbance to birds. Weather variables were recorded at the beginning of each survey, and plot photos were taken from at least one corner of the plot. Habitat cover and characterization were also recorded for each plot. Observers systematically surveyed the plot, starting from one corner and walking in tandem along the north-south transects spaced 25 m apart (CWS 2024).

PRISM surveys consisted of recording and mapping all birds seen or heard within plots according to species, sex, and age, where possible. Breeding territories within a plot were determined based on behavioural cues (e.g., carrying food or nesting materials, courtship displays, breeding pairs, alarm calling, and distraction displays). All nests observed during PRISM surveys were georeferenced and photographed. Nest details were recorded for each nest found and included the associated species, nest stage, number of eggs/nestlings, flushing distance, nest cover, and nest substrate. All birds or nonbird species outside of the PRISM plot boundaries were also recorded, but designated as incidental observations (Section 3.2.3).

#### 3.9.2.2 TIA PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING

TIA PRISM monitoring followed an identical PRISM survey protocol used for the regional PRISM monitoring outlined above (Section 3.9.2.1; CWS 2024).

TIA PRISM surveys were completed at six sites along the shoreline of the TIA (Treatment sites) and six sites along Ogama Lake (Control sites). All TIA PRISM plot sites were established in 2018 to address concerns regarding the residual effect of potential direct mortality, particularly regarding shorebird species of conservation concern. Historically, seven Treatment sites were surveyed, but one site along the southern shoreline of the TIA, PR-UB2, is no longer within suitable surveying habitat, as the TIA sediment and water now cover the entire plot. Therefore, the plot was not surveyed and has been removed from the TIA PRISM monitoring program.

PRISM monitoring at the TIA is set to occur every 2 years according to the WMMP (Agnico Eagle 2023) and will be completed again in 2026.

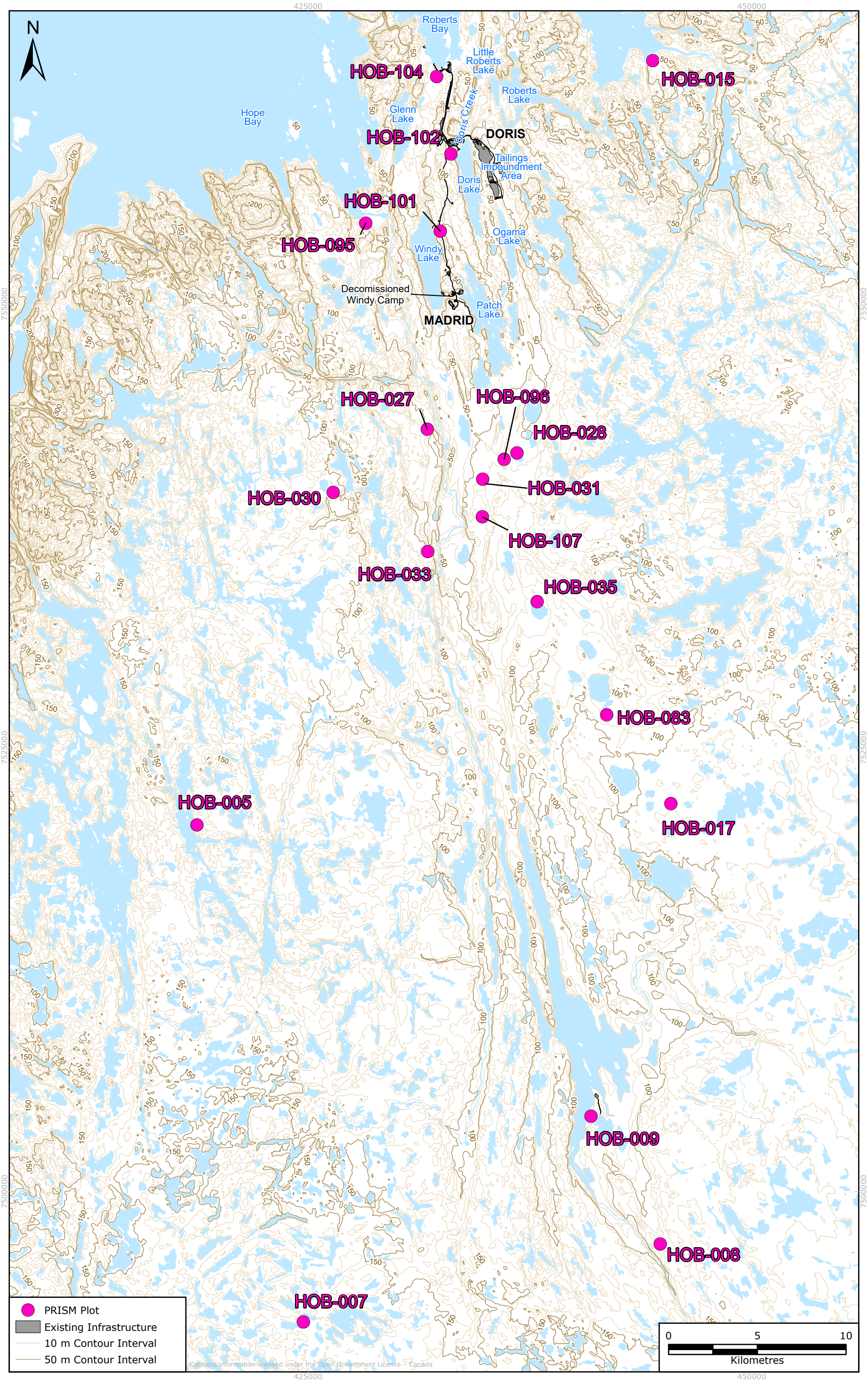
### 3.9.3 RESULTS AND DISCUSSION

#### 3.9.3.1 REGIONAL PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING

Between June 21 and July 2, 2024, PRISM surveys were completed at 19 plots: six high-priority plots and 13 medium-priority plots (Figure 3.9-1; Appendix R). As of 2024, all high-priority plots from the CWS plot list have been surveyed.

Most PRISM plots had mixed habitat types with some aquatic portions (i.e., ponds, lakes, streams, and ocean), and ranged in topography from flat to hilly. Plots varied extensively in the proportions of upland and lowland habitat types (e.g., barren, herbaceous, and shrubby). PRISM surveys averaged 1 hour 26 minutes per plot for a total survey time of 27.75 hours to complete surveying 19 PRISM plots. The weather was generally mild, with an average temperature of 5.8°C and an average wind speed of 12 to 19 kilometre per hour (km/hr; 3 on the Beaufort scale; Appendix R).

FIGURE 3.9-1 REGIONAL PRISM SURVEY LOCATIONS, 2024

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Within the PRISM plots, the species richness ranged from two to 12 species, and bird abundance ranged from eight to 47 birds. Overall, 381 upland birds from 20 upland bird species were detected (Table 3.9-1; Appendix S). Several additional avian species were incidentally detected during the PRISM surveys (Appendix G). The most abundant upland bird species were Savannah Sparrow (*Passerculus sandwichensis*), Lapland Longspur (*Calcarius lapponicus*), and Common Redpoll (Table 3.9-1). Least Sandpiper (*Calidris minutilla*) was the most common shorebird species recorded. Additionally, four species of conservation concern were observed: Red-necked Phalarope (*Phalaropus lobatus*), American Golden-Plover (*Pluvialis dominica*), Hoary Redpoll (*Acanthis hornemanni*), and Semipalmated Sandpiper (*Calidris pusilla*). Two Red-necked Phalarope nests, a species of conservation concern, were found during the PRISM surveys, one within a PRISM plot and one incidentally outside a plot boundary. A total of 15 upland bird nests from a variety of species were recorded within the PRISM plots, and several other nests were incidentally observed (Photo 3.9-1, Photo 3.9-2; Table 3.9-2). Lapland Longspur nests were the most frequently observed (Table 3.9-2).

The number of species detected in 2024 was higher than in 2022, with 20 upland bird species detected in 2024 and 16 species recorded in 2022 when the last round of PRISM surveys was completed. However, more plots were surveyed in 2024, and the survey sites differed; therefore, the two survey years are not directly comparable. Similar to 2022, Lapland Longspur and Savannah Sparrow were the most commonly detected upland bird species, while Least Sandpiper remained the most abundant shorebird species.

#### 3.9.3.2 TIA PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING

Between June 20 and June 30, 2024, PRISM surveys were completed at six TIA plots (Treatment) and six Ogama plots (Control; Figure 3.9-2; Photo 3.9-3; Appendix T). Most PRISM plots consisted of upland habitat and ranged in topography from undulating to hilly. Overall, there was a low amount of wet lowland habitat within both the TIA and the Ogama plots, which is the preferred habitat of most shorebird species. PRISM surveys averaged 1 hour 10 minutes per plot for a total survey time of 13.66 hours to complete 12 PRISM plots. The weather was generally mild, with an average temperature of 9.6°C and an average wind speed of 6 to 11 km/hr (2 on the Beaufort scale; Appendix T).

Within TIA Treatment plots, species richness ranged from five to six species, and bird abundance ranged from 16 to 31 birds (Table 3.9-3; Appendix U). Within Ogama Control plots, species abundance ranged from five to seven species, and bird abundance ranged from 14 to 27 birds. Overall, the upland bird species richness and abundance between Treatment and Control plots were similar (Table 3.9-3). Several additional species were incidentally detected during the TIA PRISM surveys (Appendix G). Two Least Sandpipers were observed incidentally at TIA Treatment plots outside of plot boundaries (Appendix G). The most abundant upland bird species for both the Treatment and Control plots were Savannah Sparrow, Lapland Longspur, Common Redpoll, and White-crowned Sparrow (*Zonotrichia leucophrys*). The Hoary Redpoll was the only upland bird species of conservation concern detected during the TIA PRISM surveys. A total of five nests were recorded within the TIA PRISM plots from a variety of upland bird species (Table 3.9-4; Photo 3.9-4). More nests were recorded in the Treatment plots compared to the Control plots, but the overall number of nests was quite low, in accordance with the less suitable, dry upland habitat of the general area.

## TABLE 3.9-1 SUMMARY OF UPLAND BREEDING BIRD OBSERVATIONS FROM THE REGIONAL PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING SURVEYS, 2024

| Common Name | Scientific Name | Total Number of Observations | | | | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Pairs | Unknown[a] | Young | Total[b] |
| American Golden-Plover* | *Pluvialis dominica* | 0 | 0 | 0 | 4 | 0 | **4** |
| American Pipit | *Anthus rubescens* | 0 | 0 | 3 | 0 | 0 | **6** |
| American Tree Sparrow | *Spizelloides arborea* | 5 | 0 | 2 | 3 | 0 | **12** |
| Baird's Sandpiper | *Calidris bairdii* | 0 | 0 | 1 | 1 | 0 | **3** |
| Common Redpoll | *Acanthis flammea* | 6 | 4 | 14 | 9 | 6 | **53** |
| Dunlin | *Calidris alpina* | 0 | 0 | 0 | 2 | 0 | **2** |
| Hoary Redpoll* | *Acanthis hornemanni* | 0 | 0 | 2 | 0 | 3 | **7** |
| Horned Lark | *Eremophila alpestris* | 2 | 4 | 5 | 2 | 0 | **18** |
| Lapland Longspur | *Calcarius lapponicus* | 31 | 6 | 19 | 0 | 0 | **75** |
| Least Sandpiper | *Calidris minutilla* | 0 | 0 | 11 | 13 | 0 | **35** |
| Pectoral Sandpiper | *Calidris melanotos* | 0 | 0 | 2 | 1 | 0 | **5** |
| Red-necked Phalarope* | *Phalaropus lobatus* | 4 | 9 | 6 | 0 | 0 | **25** |
| Rock Ptarmigan | *Lagopus muta* | 0 | 0 | 2 | 0 | 0 | **4** |
| Savannah Sparrow | *Passerculus sandwichensis* | 25 | 0 | 16 | 31 | 2 | **90** |
| Semipalmated Plover | *Charadrius semipalmatus* | 0 | 0 | 4 | 2 | 2 | **12** |
| Semipalmated Sandpiper* | *Calidris pusilla* | 0 | 0 | 1 | 0 | 0 | **2** |
| Stilt Sandpiper | *Calidris himantopus* | 0 | 0 | 1 | 3 | 0 | **5** |
| White-crowned Sparrow | *Zonotrichia leucophrys* | 3 | 0 | 2 | 11 | 0 | **18** |
| Willow Ptarmigan | *Lagopus lagopus* | 2 | 0 | 0 | 0 | 0 | **2** |
| Wilson's Snipe | *Gallinago delicata* | 0 | 0 | 0 | 3 | 0 | **3** |
| **Total** | | **78** | **23** | **91** | **85** | **13** | **381** |

Notes:
* Indicates a species of conservation concern, either federally or in Nunavut.
[a] Birds are recorded as unknown when the species is not sexually dimorphic and no sex-specific behaviours are observed (e.g., singing).
[b] The total number of observations is calculated by adding up the number of observations in all preceding columns, including doubling the number in the "Pairs" column, as a pair is two birds.

Photo 3.9-1 Nest Hob017—nest1 with four nestling Lapland longspurs, 2024.

Photo 3.9-2 Nest Hob104—nest1 belonging to a Baird's Sandpiper with four eggs, 2024.

TABLE 3.9-2 SUMMARY OF ALL NEST OBSERVATIONS FOR THE REGIONAL PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING SURVEYS, 2024

| Species Group | Nest ID | Species | Nest in Plot | Nest Stage | Egg Number[a] | Nestling Number[a] |
|---|---|---|---|---|---|---|
| Upland Birds | Hob005-nest1 | Lapland Longspur | Yes | Incubating | 4 | 0 |
| | Hob008-nest1 | Common Redpoll | Yes | Incubating | 5 | 0 |
| | Hob008-nest2 | Red-necked Phalarope* | No | Incubating | 4 | 0 |
| | Hob009-nest1 | Lapland Longspur | Yes | Nestlings | 0 | 4 |
| | Hob009-nest2 | Lapland Longspur | Yes | Nestlings | 0 | 5 |
| | Hob015-nest1 | Lapland Longspur | Yes | Incubating | 5 | 0 |
| | Hob015-nest2 | American Pipit | Yes | Incubating | 6 | 0 |
| | Hob017-nest1 | Lapland Longspur | Yes | Nestlings | 0 | 4 |
| | Hob028-nest1 | Savannah Sparrow | Yes | Incubating | 5 | 0 |
| | Hob030-nest1 | American Tree Sparrow | Yes | Incubating | 4 | 0 |
| | Hob033-nest1 | Common Redpoll | Yes | Abandoned | 2 | 0 |
| | Hob035-nest2 | Savannah Sparrow | Yes | Incubating | 5 | 0 |
| | Hob095-nest1 | Red-necked Phalarope* | Yes | Incubating | 4 | 0 |
| | Hob104-nest2 | Common Redpoll | Yes | Incubating | 2 | 0 |
| | Hob104-nest1 | Baird's Sandpiper | Yes | Incubating | 4 | 0 |
| Waterbirds | Hob007-nest1 | Yellow-billed Loon | Yes | Incubating | 2 | 0 |
| | Hob028-nest2 | Pacific Loon | No | Incubating | - | - |
| | Hob035-nest1 | Greater White-fronted Goose | Yes | Incubating | 6 | 0 |
| | Hob083-nest1 | Arctic Tern | Yes | Incubating | - | - |
| | Hob083-nest2 | Long-tailed Duck | Yes | Incubating | - | - |
| | Hob095-nest2 | Pacific Loon | No | Incubating | - | - |
| | Hob101-nest1 | Red-throated Loon | No | Incubating | - | - |
| | Hob107-nest2 | Northern Pintail | Yes | Fledged | 0 | 3 |
| | Hob107-nest1 | Red-throated Loon | Yes | Incubating | - | - |

Notes:
- = Indicates an unknown number of eggs or nestlings because the adult was incubating and not disturbed
* Indicates a species of conservation concern, either federally or in Nunavut.
[a] The number of eggs or nestlings was not always recorded, as some nests with incubating adults remained undisturbed.

FIGURE 3.9-2 TAILINGS IMPOUNDMENT AREA AND OGAMA LAKE PRISM SURVEY LOCATIONS, 2024

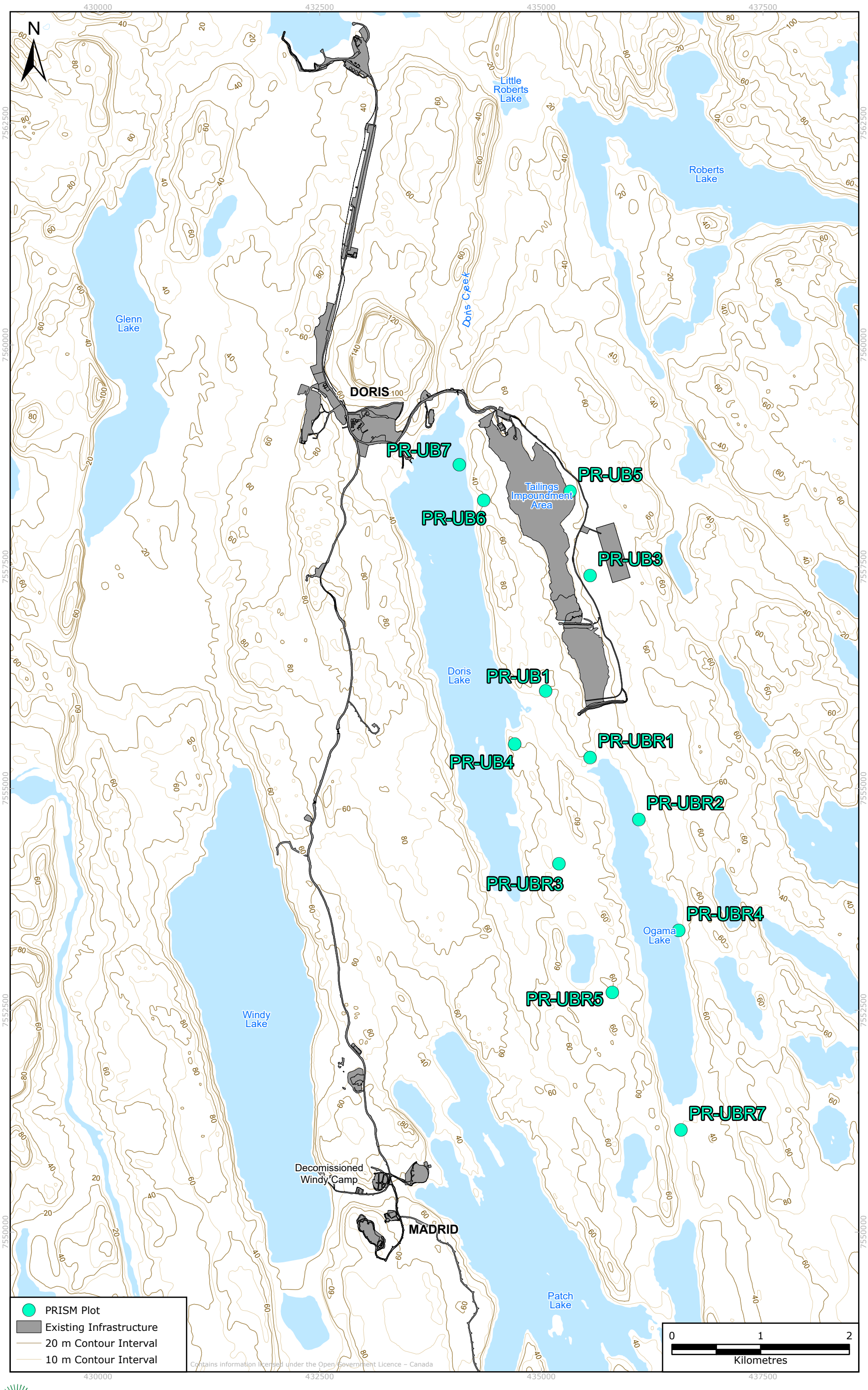




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Photo 3.9-3 TIA Program for Regional and International Shorebird Monitoring Treatment plot PR-UB7, 2024.

Photo 3.9-4 Nest Prub1—nest1 belonging to a Common Redpoll with three eggs at a TIA Program for Regional and International Shorebird Monitoring Treatment plot, 2024.

## TABLE 3.9-3 SUMMARY OF BIRD OBSERVATIONS FROM THE TIA AND OGAMA LAKE PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING SURVEYS, 2024

| Plot Type | Species Name | Scientific Name | Total Number of Observations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Male | Female | Pairs | Unknown[a] | Young | Total[b] |
| TIA Treatment | American Pipit | *Anthus rubescens* | 0 | 0 | 1 | 4 | 0 | 6 |
| | American Tree Sparrow | *Spizelloides arborea* | 4 | 0 | 2 | 1 | 0 | 9 |
| | Common Redpoll | *Acanthis flammea* | 2 | 2 | 8 | 10 | 1 | 31 |
| | Horned Lark | *Eremophila alpestris* | 0 | 0 | 2 | 1 | 0 | 5 |
| | Hoary Redpoll* | *Acanthis hornemanni* | 0 | 0 | 1 | 0 | 2 | 4 |
| | Lapland Longspur | *Calcarius lapponicus* | 13 | 3 | 3 | 0 | 0 | 22 |
| | Savannah Sparrow | *Passerculus sandwichensis* | 16 | 0 | 3 | 11 | 0 | 33 |
| | White-crowned Sparrow | *Zonotrichia leucophrys* | 5 | 0 | 7 | 10 | 0 | 29 |
| | Willow Ptarmigan | *Lagopus lagopus* | 0 | 0 | 1 | 0 | 0 | 2 |
| Ogama Lake Control | American Pipit | *Anthus rubescens* | 0 | 0 | 0 | 1 | 0 | 1 |
| | American Tree Sparrow | *Spizelloides arborea* | 6 | 0 | 4 | 6 | 0 | 20 |
| | Common Redpoll | *Acanthis flammea* | 2 | 3 | 5 | 4 | 4 | 23 |
| | Horned Lark | *Eremophila alpestris* | 0 | 0 | 1 | 0 | 0 | 2 |
| | Lapland Longspur | *Calcarius lapponicus* | 7 | 1 | 6 | 3 | 0 | 23 |
| | Savannah Sparrow | *Passerculus sandwichensis* | 3 | 0 | 8 | 8 | 0 | 27 |
| | White-crowned Sparrow | *Zonotrichia leucophrys* | 2 | 0 | 5 | 13 | 0 | 25 |
| | Willow Ptarmigan | *Lagopus lagopus* | 1 | 0 | 0 | 0 | 0 | 1 |
| **Total** | | | **61** | **9** | **57** | **72** | **7** | **263** |

Notes:
TIA = Tailings Impoundment Area
[a] Birds are recorded as unknown when the species is not sexually dimorphic and no sex-specific behaviours are observed (e.g., singing).
[b] The total number of observations is calculated by adding up the number of observations in all preceding columns, including doubling the number in the "Pairs" column, as a pair is two birds.

## TABLE 3.9-4 SUMMARY OF ALL NEST OBSERVATIONS FOR THE TIA AND OGAMA LAKE PROGRAM FOR REGIONAL AND INTERNATIONAL SHOREBIRD MONITORING SURVEYS, 2024

| Plot Type | Nest ID | Species | Nest in Plot | Nest Stage | Egg Number | Nestling Number |
|---|---|---|---|---|---|---|
| TIA Treatment | Prub5-nest01 | White-crowned Sparrow | Yes | Incubating | 5 | 0 |
| TIA Treatment | Prub3-nest1 | American Tree Sparrow | Yes | Incubating | 5 | 0 |
| TIA Treatment | Prub1-nest1 | Common Redpoll | Yes | Incubating | 3 | 0 |
| TIA Treatment | Prub6-nest1 | Savannah Sparrow | Yes | Incubating | 4 | 0 |
| Ogama Lake Control | Prubr2-nest1 | Common Redpoll | Yes | Incubating | 5 | 0 |

Note:
TIA = Tailings Impoundment Area

The number of upland bird species detected in 2024 was slightly lower than in 2021, when the last round of TIA PRISM surveys was completed. The 2024 results indicate that similar species were abundant in 2022, including Common Redpoll, whose nests were the most frequently found in both survey years. Similarly to 2022, species richness and bird abundance was quite similar between the TIA Treatment and Ogama Control plots.

#### 3.9.3.3 INTERACTIONS, INCIDENTS, AND MORTALITIES

No upland breeding bird interactions, incidents, or mortalities were recorded in 2024 (Appendix E).

#### 3.9.3.4 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2024, upland breeding birds were observed on 60 occasions as recorded in the wildlife sightings log (Table 3.9-5; Appendix F). The majority of wildlife sightings log observations were of ptarmigan. Additional upland bird species recorded via the wildlife sightings log included American Pipit (*Anthus rubescens*), American Robin (*Turdus migratorius*), Common Redpoll, Hoary Redpoll, Horned Lark (*Eremophila alpestris*), Say's Phoebe (*Sayornis saya*), Snow Bunting, Semipalmated Plover, and Least Sandpiper (Appendix F). The Semipalmated Plover and Least Sandpiper observations were recorded in the Windy Road / Madrid areas. In addition, many upland birds were recorded incidentally by biologists throughout the Study Area and details can be found in Appendix G (Table 3.9-5).

TABLE 3.9-5 UPLAND BREEDING BIRDS SIGHTINGS AND INCIDENTAL OBSERVATIONS, 2024

| General Location | Months | Total Sightings | Total Individuals[a] |
|---|---|---|---|
| Doris Area | February–December | 27 | 170 |
| Roberts Bay | January–December | 7 | 47 |
| Windy Road / Madrid | February–December | 14 | 142 |
| TLR/TIA | February–November | 11 | 63 |
| Unspecified | September | 1 | 12 |
| Various Wildlife Survey Sites | June–July | - | 297 |

Notes:
- = Total sightings are not provided for incidental biologist observations because these totals are combined from several wildlife surveys
TIA = Tailings Impoundment Area; TLR = Tail Lake Road
[a] The total number of individuals provided may not always be representative of the true number of individuals recorded, as certain wildlife sightings may include double counting of the same individual(s).

Similarly to 2023, the majority of upland birds recorded on the wildlife sightings log occurred in the Doris area. The total number of individuals and number of species recorded was much higher in 2024 compared to 2023; however, this is accounted for by wildlife monitoring programs being completed in 2024 and the lack of programs in 2023.

#### 3.9.3.5 SPECIES OF CONSERVATION CONCERN

In 2024, several upland bird species of conservation concern were observed (Table 3.3-1). American Golden-Plovers were observed both incidentally and during upland bird monitoring by biologists (Section 3.9.3.1; Appendix G). The most commonly observed species of conservation concern was the Red-necked Phalarope, with 25 adults and two nests found during the regional PRISM surveys (Section 3.9.3.1), and five observed incidentally by biologists (Appendix G). The Semipalmated Plover was observed on 12 occasions during the regional PRISM surveys (Section 3.9.3.1) and observed incidentally by biologists (Appendix G). Hoary Redpolls were observed with young during both regional PRISM surveys and TIA PRISM surveys, and were the least commonly observed species of conservation concern with 11 detections (Section 3.9.3.1, Section 3.9.3.3). No upland bird species of conservation concern were observed via the wildlife sightings log. Many more species of conservation concern were observed in 2024 compared to 2023; however, this is accounted for by upland bird monitoring programs being completed in 2024 as opposed to no programs in 2023.

## 3.10 WATERBIRDS

Waterbird monitoring for the Doris compliance program is currently completed every 2 years, with surveys completed in 2024. Waterbird field surveys for the Doris compliance program have been scaled back from previous years, after comprehensive analyses of the dataset from 2006 to 2018 (TMAC 2019) and discussion with CWS. Waterbird monitoring currently includes the following two survey programs:

- Regional shoreline monitoring, which consists of ground surveys along the shorelines of waterbodies at varying distances from the site infrastructure (sites were established in 2022).
- TIA shoreline monitoring, which consists of ground surveys for the detection of waterbirds and as supplemental surveys to the TIA PRISM monitoring (Section 3.9) along the shorelines of the TIA (Treatment sites) and Ogama Lake (Control sites; sites were established in 2018).

Water quality is monitored at the TIA, in accordance with Commitment 31 and Condition 26 (NIRB 2018). If water quality exceeds guidelines, a toxicological risk assessment is required to determine if it is safe for birds to use or nest on the TIA. If that assessment determines that there is a risk to waterbird health, then waterbirds require deterrence from the TIA. Water quality was monitored at the TIA in 2024 and did not exceed guidelines for wildlife; therefore, no risk assessment was warranted (Section 3.10.3.3; Appendix Z).

### 3.10.1 FEIS PREDICTIONS

The residual effect of disturbance in the LSA for waterbirds was predicted to be nonsignificant and of negligible magnitude in the Madrid-Boston FEIS, and the residual effect of direct mortality in the PDA was predicted to be nonsignificant and of low magnitude (TMAC 2017). Regardless, waterbird monitoring occurs at the TIA and the associated Control site of Ogama Lake (Project Certificate No. 009 Term and Condition 26; NIRB 2018).

## 3.10.2 METHODS

In 2024, the potential effects of Mine-related activities on waterbirds were determined by ground-based surveys; monitoring water quality in the TIA (Section 3.10.2.3); the interactions, incidents, and mortalities program; and the wildlife sightings log. General methods for these programs are outlined in Section 3.2.

### 3.10.2.1 REGIONAL SHORELINE MONITORING

Regional ground-based waterbird surveys were completed along the shorelines of waterbodies at varying distances from the site infrastructure. All regional shoreline monitoring sites were established in 2022 and consist of the following (Figure 3.10-1):

- Six Treatment sites within 2 km of the Mine infrastructure;
- Six Control sites that are further than 2 km from the Mine infrastructure; and
- Three "Ladder" sites that are currently more than 2 km (Control) from the Mine infrastructure, but may change in future years as development potentially expands.

Surveys were completed during the nesting season (late June 2024) to determine breeding waterbird use of the area. Surveys consisted of fixed radius (200 m) counts for a set time of 20 minutes to record all birds seen or heard. Survey locations were approached on foot from 200 m or further away to avoid disturbance to birds prior to surveys (e.g., noise and visual disturbance from trucks or helicopters). At each survey site, all bird observations were recorded according to species, number of individuals, sex, age, and behaviour, if possible. Weather variables and habitat information were also recorded at each site. Bird observations were recorded as incidental if they were observed more than 200 m from the observer, were flying over, or if they were seen or heard before or after the survey window.

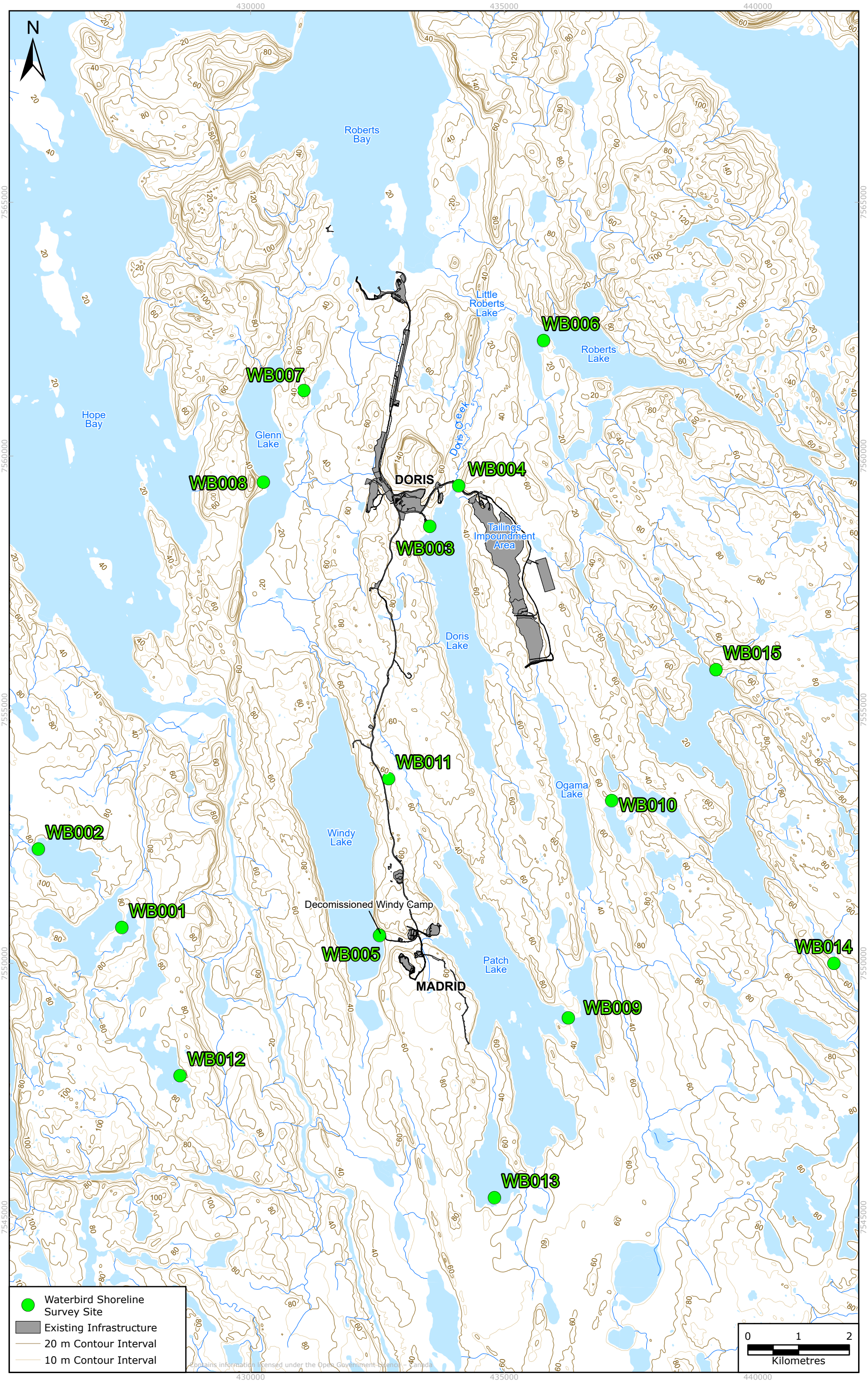
### 3.10.2.2 TIA SHORELINE MONITORING

TIA ground-based waterbird surveys were completed along the shorelines of the TIA (Treatment sites) and at Ogama Lake (Control sites). All TIA shoreline monitoring sites were established in 2018: six sites at the TIA and six sites at Ogama Lake. Surveys methods were identical to those used for the regional shoreline monitoring outlined in Section 3.10.2.1.

### 3.10.2.3 WATER QUALITY MONITORING IN THE TIA FOR WATERBIRDS

As part of the existing water licence requirements and WMMP commitments (Agnico Eagle 2023), onsite staff sampled water quality in the TIA at location TL1 every week in 2024 (n = 50). Water quality monitoring results were compared to the CCME's Water quality guidelines for the Protection of Agriculture—Livestock, as those are the guidelines that are available and most relevant for wildlife (CCME 2021).

FIGURE 3.10-1 REGIONAL SHORELINE SURVEY LOCATIONS, 2024




ERM

CLIENT: Agnico Eagle Mines Ltd.
GIS NUMBER: HB-23-614-06

DATE: 03/17/2025

PROJECTION: NAD 1983 UTM Zone 13N
SCALE: 1:70,000 when printed at 11x17

## 3.10.3 RESULTS AND DISCUSSION

### 3.10.3.1 REGIONAL SHORELINE MONITORING

Regional shoreline surveys were completed at 15 sites: six Treatment sites (<2 km from infrastructure), six Control sites (>2 km from infrastructure), and three Ladder sites (currently included as Control sites; Figure 3.10-1). Most sites consisted of medium to large wetlands, ponds, or lakes. The weather was relatively mild, with an average temperature of 8.3°C and an average wind speed of 16 km/hr (Appendix V).

Findings from the 2024 surveys reveal somewhat similar findings to the 2022 surveys, when the last round of regional shoreline monitoring was completed. The total number of waterbird species detected was similar, and the number of species across sites was comparable between Control and Impact sites. Conversely to 2022, the 2024 surveys recorded a higher range of waterbird abundance at Treatment sites rather than at Control sites, both years being influenced by larger flocks of waterbirds (e.g., Cackling Geese; Table 3.10-1) at certain sites.

At Treatment sites, species richness ranged from one to three waterbird species, and bird abundance ranged from one to 37 waterbirds. At Control sites (including Ladder sites), species richness ranged from one to four waterbird species, and bird abundance ranged from one to 13 waterbirds. Overall, the number of waterbird species were similar between Control and Treatment, although Treatment sites had a higher range of waterbird abundance (Table 3.10-1; Appendix W). Several additional avian species were incidentally detected during the regional shoreline surveys (Appendix G).
The most abundant waterbird species at the Treatment sites were Cackling Goose (*Branta hutchinsii*) and Greater White-fronted Goose (*Anser albifrons*). The most abundant waterbird species at Control sites (including Ladder sites) were Northern Pintail (*Anas acuta*) and Pacific Loon (*Gavia pacifica*).
No species of conservation concern were detected during the regional shoreline surveys. Young were observed for several species of waterbirds: Cackling Goose, Greater White-fronted Goose, Northern Pintail, Canada Goose (*Branta canadensis*), and Tundra Swan (*Cygnus columbianus*; Photo 3.10-1; Appendix W). Two waterbird nests were found during regional shoreline surveys, either within the point count radius or incidentally: one Canada Goose nest and one Red-throated Loon (*Gavia stellata*) nest.

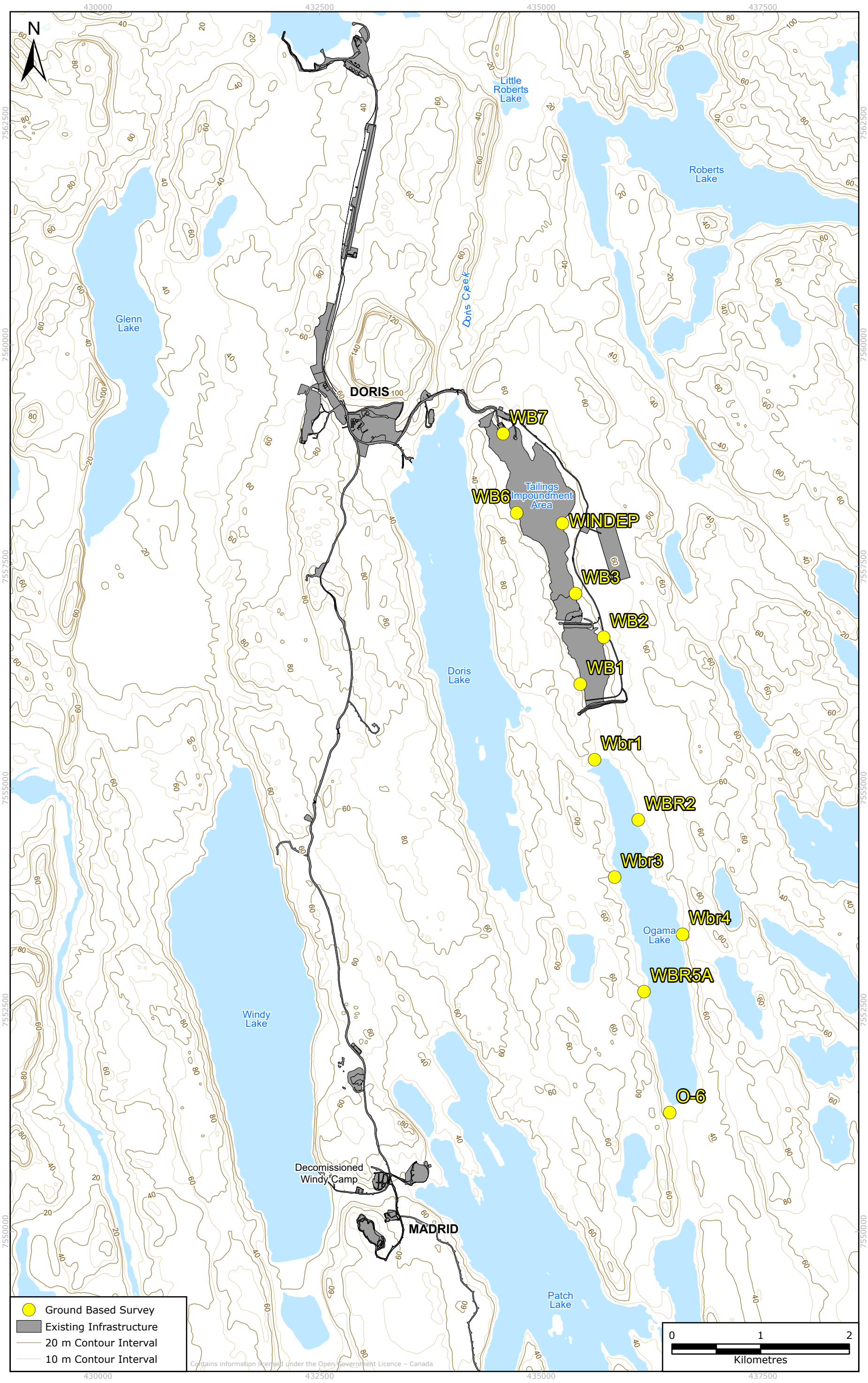
### 3.10.3.2 TIA SHORELINE MONITORING

TIA shoreline surveys were completed at 12 sites: six TIA Treatment sites and six Ogama Lake Control sites (Figure 3.10-2). The weather was relatively mild, with an average temperature of 5.8°C and an average wind speed of 15 km/hr (Appendix X).

## TABLE 3.10-1 SUMMARY OF WATERBIRD OBSERVATIONS FROM THE REGIONAL SHORELINE SURVEYS, 2024

| Species Group | Species | Scientific Name | Treatment | Control | Ladder (Currently Control) | Total |
|---|---|---|---|---|---|---|
| Waterbirds | Cackling Goose | *Branta hutchinsii* | 28 | 3 | 0 | **31** |
| | Canada Goose | *Branta canadensis* | 3 | 0 | 0 | **3** |
| | Greater Scaup | *Aythya marila* | 0 | 3 | 0 | **3** |
| | Greater White-fronted Goose | *Anser albifrons* | 7 | 0 | 0 | **7** |
| | Herring Gull | *Larus smithsonianus* | 0 | 1 | 0 | **1** |
| | Long-tailed Duck | *Clangula hyemalis* | 2 | 5 | 0 | **7** |
| | Northern Pintail | *Anas acuta* | 0 | 5 | 11 | **16** |
| | Pacific Loon | *Gavia pacifica* | 2 | 1 | 5 | **8** |
| | Red-breasted Merganser | *Mergus serrator* | 0 | 5 | 0 | **5** |
| | Red-throated Loon | *Gavia stellata* | 1 | 0 | 0 | **1** |
| | Sandhill Crane | *Grus canadensis* | 4 | 0 | 0 | **4** |
| | Tundra Swan | *Cygnus columbianus* | 4 | 0 | 0 | **4** |
| **Total** | | | **51** | **23** | **16** | **90** |

FIGURE 3.10-2 TAILINGS IMPOUNDMENT AREA AND OGAMA LAKE SHORELINE SURVEY LOCATIONS, 2024




ERM

CLIENT: Agnico Eagle Mines Ltd.
GIS NUMBER: HB-23-614-07

DATE: 03/17/2025

PROJECTION: NAD 1983 UTM Zone 13N
SCALE: 1:40,000 when printed at 11x17

Photo 3.10-1 Greater White-fronted Goose with goslings observed during regional shoreline monitoring, 2024.

A total of eight waterbird species were detected between the Treatment and Control sites. At Treatment sites, species richness ranged from zero to three waterbird species, and waterbird abundance ranged from zero to 17 birds. At Control sites, species abundance ranged from zero to two waterbird species, and waterbird abundance ranged from zero to three birds. Overall, the numbers of waterbird species between Treatment and Control sites were similar, but the abundance of birds was higher at Treatment sites (Table 3.10-2; Appendix Y). Several additional avian species were incidentally detected during the regional shoreline surveys (Appendix G). The most abundant waterbird species at the Treatment sites were Canada Goose and Long-tailed Duck (*Clangula hyemalis*). The most abundant waterbird species at the Control sites were Pacific Loon, Red-throated Loon, and Greater Scaup (*Aythya marila*; Table 3.10-2; Appendix Y). No species of conservation concern were detected during the regional shoreline surveys. No young or nests were observed during the TIA shoreline surveys. Additionally, some shorebirds were incidentally detected at TIA Treatment sites: Least Sandpiper and Semipalmated Plover (Appendix G). This is likely due to the TIA having some areas of shoreline more suitable for foraging shorebirds (e.g., soft substrate) compared to the Ogama Lake shoreline.

The overall number of waterbird species detected in 2024 was comparable to 2021, when the last round of TIA shoreline surveys was completed. Additionally, the Canada Goose was the overall most abundant waterbird species in both years. Compared to 2021 surveys, which did not incidentally detect any shorebird species, two shorebird species were detected in relatively low abundance at TIA Treatment sites in 2024, indicating that certain shorebird species use this area in low abundance during the breeding season (Appendix G).

## TABLE 3.10-2 SUMMARY OF WATERBIRD OBSERVATIONS FROM THE TIA AND OGAMA LAKE SHORELINE SURVEYS, 2024

| Species Group | Species | Scientific Name | TIA (Treatment) | Ogama (Control) | Total |
|---|---|---|---|---|---|
| Waterbirds | Canada Goose | *Branta canadensis* | 28 | 1 | **29** |
| | Greater Scaup | *Aythya marila* | 0 | 2 | **2** |
| | Greater White-fronted Goose | *Anser albifrons* | 5 | 0 | **5** |
| | Long-tailed Duck | *Clangula hyemalis* | 9 | 0 | **9** |
| | Northern Pintail | *Anas acuta* | 2 | 1 | **3** |
| | Pacific Loon | *Gavia pacifica* | 3 | 2 | **5** |
| | Red-breasted Merganser | *Mergus serrator* | 2 | 0 | **2** |
| | Red-throated Loon | *Gavia stellata* | 0 | 2 | **2** |
| **Total** | | | **49** | **8** | **57** |

Note:
TIA = Tailings Impoundment Area

#### 3.10.3.3 WATER QUALITY MONITORING IN THE TIA FOR WATERBIRDS

Table 3.10-3 presents summary statistics for water quality parameters measured at TL1 in the TIA in 2024 and the corresponding CCME water quality guidelines (CCME 2021). The comparison of maximum concentrations to respective guideline values indicates that water quality in the TIA meets guidelines for wildlife. Therefore, no parameter was screened for further evaluation in an ecological risk assessment. Detailed water quality monitoring results are presented in Appendix Z.

#### 3.10.3.4 INTERACTIONS, INCIDENTS, AND MORTALITIES

No waterbird interactions, incidents, or mortalities were recorded in 2024 (Appendix E).

#### 3.10.3.5 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2024, waterbirds were recorded on 61 occasions on the wildlife sightings log (Table 3.10-4; Appendix F). A variety of waterbird species were observed via the wildlife sightings log, including two Arctic Terns, one Cackling Goose, 70 Canada Geese, 107 Sandhill Cranes (*Grus canadensis*), 26 Greater White-fronted Geese, 20 Greater Scaup, one Northern Pintail, two Pacific Loons, one Red-throated Loon, 52 Snow Geese (*Anser caerulescens*), and 15 Tundra Swans, two unidentified duck, one unidentified eider, 192 unidentified geese, three unidentified loons, and five unidentified gulls (Appendix F). In addition, many waterbirds were recorded incidentally by biologists throughout the Study Area and details can be found in Appendix G (Table 3.10-4).

Similarly to 2023, the majority of waterbirds recorded on the wildlife sightings log occurred in the Windy Road / Madrid area. The total number of individuals and number of species recorded was much higher in 2024 compared to 2023; however, this is accounted for by wildlife monitoring programs being completed in 2024 and the lack of programs in 2023.

#### 3.10.3.6 OBSERVATIONS FROM ABOARD VESSELS

Wildlife sighting logs were completed along shipping routes by shipping vessel operators (Appendix AB), program details of which are described in Section 3.12. Between the three vessels that serviced the Mine, waterbirds were observed on 15 occasions from September to October 2024. Nine Northern Fulmar (*Fulmarus glacialis*), three Razorbills (*Alca torda*), 31 Glaucous Gulls (*Larus hyperboreus*), two Iceland Gulls (*Larus glaucoides*), one Herring Gull (*Larus smithsonianus*), one unidentified gull, and 10 unidentified waterbirds were recorded. Additional details regarding waterbird observations from aboard vessels are provided in Appendix AB.

## TABLE 3.10-3 SUMMARY STATISTICS FOR WATER QUALITY PARAMETERS WITH CCME GUIDELINES AT THE TIA (TL1), 2024

| Parameter | CCME Water Quality Criteria—Livestock[a] (mg/L) | Mean (mg/L) | Standard Deviation (mg/L) | Maximum (mg/L) | Selected for Further Assessment? |
|---|---|---|---|---|---|
| Arsenic (As)—Total | 0.025 | 0.00222 | 0.00036 | 0.00282 | No |
| Cadmium (Cd)—Total | 0.08 | 0.00003 | 0.00001 | 0.00005 | No |
| Copper (Cu)—Total[b] | 5 | 0.01500 | 0.00460 | 0.03240 | No |
| Lead (Pb)—Total | 0.1 | 0.00027 | 0.00008 | 0.00055 | No |
| Mercury (Hg)—Total | 0.003 | 0.00001 | 0.0000 | 0.00001 | No |
| Nickel (Ni)—Total | 1 | 0.00917 | 0.00799 | 0.06070 | No |
| Selenium (Se)—Total | 0.05 | 0.00031 | 0.00011 | 0.00077 | No |
| Zinc (Zn)—Total | 50 | 0.01528 | 0.00314 | 0.03000 | No |

Notes:
mg/L = milligram per litre
CCME = Canadian Council of Ministers of the Environment
[a] CCME Water Quality Guidelines for the Protection of Agriculture—Livestock (CCME 2021).
[b] Guideline is variable and 5 mg/L for poultry was used from the CCREM's 1987 (updated in 2008) Canadian Water Quality Guidelines.

## TABLE 3.10-4 WATERBIRD SIGHTINGS AND INCIDENTAL OBSERVATIONS, 2024

| General Location | Months | Total Sightings[a] | Total Individuals[a, b] |
|---|---|---|---|
| Doris Area | March—August | 11 | 39 |
| Roberts Bay | May—August | 3 | 20 |
| Windy Road / Madrid | May—August | 37 | 353 |
| TLR/TIA | May—September | 9 | 81 |
| Unspecified | August | 1 | 7 |
| Various Wildlife Survey Sites | June—July | - | 609 |

Notes:
- = Total sightings are not provided for incidental biologist observations because these totals are combined from several wildlife surveys.
TIA = Tailings Impoundment Area; TLR = Tail Lake Road
[a] The counts also include gull species that are included as part of the nest predator VEC as well.
[b] The total number of individuals provided may not always be representative of the true number of individuals present, as certain wildlife sightings may include double counting of the same individual(s).

#### 3.10.3.7 SPECIES OF CONSERVATION CONCERN

In 2024, both waterbird species of conservation concern with the potential to occur at the Mine were observed: Common Eider (*Somateria mollissima*) and King Eider (*Somateria spectabilis*; Table 3.3-1; Section 3.2.4). One Common Eider and one King Eider were observed incidentally by biologists (Appendix G). Additionally, one unidentified eider species was observed via the wildlife sightings log and, as the Common Eider and King Eider are the only eider species whose distributions include Nunavut, the observation was very likely one of these two species of conservation concern (Appendix F). Compared to 2023, where no waterbird species of conservation concern were recorded, all potential waterbird species of conservation concern were observed at low abundance in 2024. However, this is accounted for by bird monitoring programs being completed in 2024 as opposed to no programs in 2023.

## 3.11 RAPTORS

The raptor monitoring for the Doris compliance program was discontinued following a comprehensive statistical analysis of raptor nesting data to test Madrid-Boston FEIS predictions (ERM 2019), and discussion with ECCC and the Government of Nunavut. In 2024, raptors were monitored through methods common to multiple VECs (Section 3.3).

Occupancy surveys of raptor territories in Madrid North were not completed in 2024 because construction did not occur in the area during the raptor breeding period. These surveys are required if construction occurs during the raptor breeding period as part of Condition 27 for Project Certificate No. 009 (NIRB 2018).

### 3.11.5 FEIS PREDICTIONS

The residual effect of disturbance in the RSA and direct mortality in the PDA for raptors was predicted to be not significant and of low magnitude in the Madrid-Boston FEIS (TMAC 2017).

### 3.11.6 METHODS

Raptors were monitored in 2024 through the wildlife interactions, incidents, and mortalities program, and the incidental sightings program. General methods for these programs are described in Section 3.2.

### 3.11.7 RESULTS AND DISCUSSION

#### 3.11.7.1 INTERACTIONS, INCIDENTS, AND MORTALITIES

No raptor interactions, incidents, or mortalities were recorded in 2024 (Appendix E).

#### 3.11.7.2 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2024, 53 observations of raptors were recorded on the wildlife sightings log (Table 3.11-1; Appendix F). Six species of raptors were observed in 2024: Golden Eagle (*Aquila chrysaetos*), Bald Eagle (*Haliaeetus leucocephalus*), Gyrfalcon (*Falco rusticolus*), Peregrine Falcon (*Falco peregrinus*), Rough-legged Hawk (*Buteo lagopus*), and Snowy Owl (*Bubo scandiacus*). Eagles were observed on 10 occasions and included observations of nine Golden Eagles, one Bald Eagle, and

four unidentified eagles. Falcons were observed on 14 occasions and included 10 Gyrfalcons and 10 Peregrine Falcons. Hawks were observed on 11 occasions and included 14 Rough-legged Hawks and four unidentified hawks. One Snowy Owl was recorded in December 2024. In addition, several raptors were recorded incidentally by biologists throughout the Study Area and details can be found in Appendix G (Table 3.11-1). A single raptor nest was observed in 2024—a Golden Eagle nest recorded incidentally by biologists (Section 3.11.7.3). Biologists also observed a Short-eared Owl (*Asio flammeus*; Section 3.11.7.3).

TABLE 3.11-1 RAPTOR SIGHTINGS AND INCIDENTAL OBSERVATIONS, 2024

| General Location | Months | Total Sightings | Total Individuals[a] |
|---|---|---|---|
| Doris Area | April—July | 7 | 13 |
| Roberts Bay | August and December | 2 | 2 |
| Windy Road / Madrid | March—August | 21 | 32 |
| TLR/TIA | May—August | 5 | 5 |
| Unspecified | August | 1 | 1 |
| Various Wildlife Survey Sites | June—July | - | 26 |

Notes:
- = Total sightings are not provided for incidental biologist observations because these totals are combined from several wildlife surveys.
TIA = Tailings Impoundment Area; TLR = Tail Lake Road
[a] The total number of individuals provided may not always be representative of the true number of individuals recorded, as certain wildlife sightings may include double counting of the same individual(s).

More species and total sightings were recorded in 2024 compared to 2023; however, this is somewhat accounted for by wildlife monitoring programs being completed in 2024 in addition to the wildlife sightings log. In addition, as opposed to 2023, raptors were most often recorded on the Windy Road / Madrid area rather than the Doris area.

### 3.11.7.3 SPECIES OF CONSERVATION CONCERN

In 2024, both raptor species of conservation concern with the potential to occur at the Mine were observed: Golden Eagle and Short-eared Owl (Table 3.3-1; Section 3.2.4). Nine Golden Eagles were recorded via the wildlife sightings log (Appendix F) and seven were incidentally observed by biologists (Appendix G). In addition, a Golden Eagle nest site was found incidentally by biologists during the regional shoreline monitoring near site WB008, on a cliff near the western shoreline of Glenn Lake (Photo 3.11-1; Section 3.10.3.1). The nest site contained three alternative nest sites on a cliff face, with one nest being actively built by the Golden Eagle pair when found. The nest site coordinates were communicated to Agnico Eagle onsite staff to ensure appropriate mitigation was followed as per the WMMP, particularly for any helicopters flying in the area (Agnico Eagle 2023). One Short-eared Owl was observed incidentally by biologists during a regional PRISM survey (Photo 3.11-2; Appendix G).

Photo 3.11-1 Golden Eagle nest site, with an adult Golden Eagle, observed incidentally during a regional shoreline survey at site WB008, 2024.

Photo 3.11-2 Short-eared Owl observed incidentally during a regional Program for Regional and International Shorebird Monitoring survey, 2024.

## 3.12 MARINE MAMMALS

Mitigation measures for marine mammals related to shipping activity are described in the Shipping Management Plan (based on Conditions 30, 31, and 32 in Project Certificate No. 009; NIRB 2018). Mitigation measures include required measures for shipping vessels, and reporting of incidental sightings and incidents on shipping routes.

The Shipping Management Plan was updated in early 2023 to include monitoring for marine wildlife in Roberts Bay during the shipping season to assess disturbance to marine wildlife resulting from Mine-related underwater noise, following Condition 33 in Project Certificate No 009 (NIRB 2018). Appropriate indicators and thresholds to determine if negative impacts on marine wildlife are occurring will be established after at least 2 years of data collection. Adaptive management measures to mitigate adverse impacts of Mine-related noise will be developed, if required. Monitoring for this program was completed for the second time in 2024.

### 3.12.1 FEIS PREDICTIONS

The assessment determined that there was no potential of residual effects on ringed seals (*Pusa hispid*a), which were used as an indicator for the larger marine mammal community, and therefore the residual effects were predicted to be not significant in the Madrid-Boston FEIS (TMAC 2017). However, marine mammal monitoring occurs due to Project Certificate requirements (NIRB 2018).

### 3.12.2 METHODS

Marine mammals are monitored via observation surveys at Roberts Bay during shipping activity, vessel observations and tracking, as well as through the Wildlife Sightings/Reporting program (Section 3.2.3).

#### 3.12.2.1 MARINE MAMMAL MONITORING

The marine wildlife monitoring program is used to assess the disturbance of marine wildlife during shipping season from vessel noise. In 2024, the surveys were completed in Roberts Bay once per day for at least 4 days during each of the following: before the ships arrived in the bay, while they were anchored in the bay, and after they had departed. Surveys followed the Hope Bay Marine Mammal Monitoring SOP, which details data collection protocols and provides resources for common species identification. Surveys were completed from the shore, at locations with the best view of Roberts Bay (the jetty or the 730 building). Surveys lasted 30 minutes and observers scanned for the presence and behaviour of any marine mammals in Roberts Bay. In addition, mitigation measures actioned, if required, were recorded.

#### 3.12.2.2 SHIPPING MITIGATIONS AND WILDLIFE SIGHTING LOGS

Wildlife sightings and incidents along shipping routes were reported by shipping vessel operators. Vessel operators were provided with Mine-specific training, including review of marine wildlife setbacks and appropriate mitigation measures. In addition, operators were trained on reporting requirements prior to the shipping season as described in the Shipping Management Plan. Operators were also provided with identification guides for seabirds, whales, and pinnipeds.

Additionally, vessel tracks were assessed via data from the Wood Mackenzie vessel tracking database to confirm that setbacks and avoidance areas (e.g., avoidance of key habitat sites for migratory birds; ECCC 2016) were followed.

## 3.12.3 RESULTS AND DISCUSSION

### 3.12.3.1 MARINE MAMMAL MONITORING

In 2024, 33 marine mammal surveys were completed in Roberts Bay. Surveys occurred once per day from September 1 to October 2, 2024 (Appendix AA; Table 3.12-1). Three vessels arrived in Roberts Bay during the shipping season: the Mitiq, the Nordika Desgagnes, and the Qikiqtaaluk W (Figure 3.12-1). The only marine mammal recorded, one ringed seal, was observed during a survey when the Mitiq and Qikiqtaaluk W were anchored in Roberts Bay, and a barge and tugboat were actively moving between the Mitiq and the shore (Table 3.12-1; Appendix AA). The ringed seal was observed resting on an exposed rock in the water and did not demonstrate any behavioural changes in response to the shipping activity.

TABLE 3.12-1 MARINE MAMMAL MONITORING AT ROBERTS BAY, 2024

| Monitoring Period | Monitoring Dates | Total Marine Mammals | Notes |
|---|---|---|---|
| Before Shipping | September 1–9, 2024 | 0 | None |
| During Shipping | September 10–28, 2024 | 1 | 1 ringed seal, resting, undisturbed by shipping activity |
| After Shipping | September 29–October 2, 2024 | 0 | None |

### 3.12.3.2 SHIPPING MITIGATION AND WILDLIFE SIGHTING LOGS

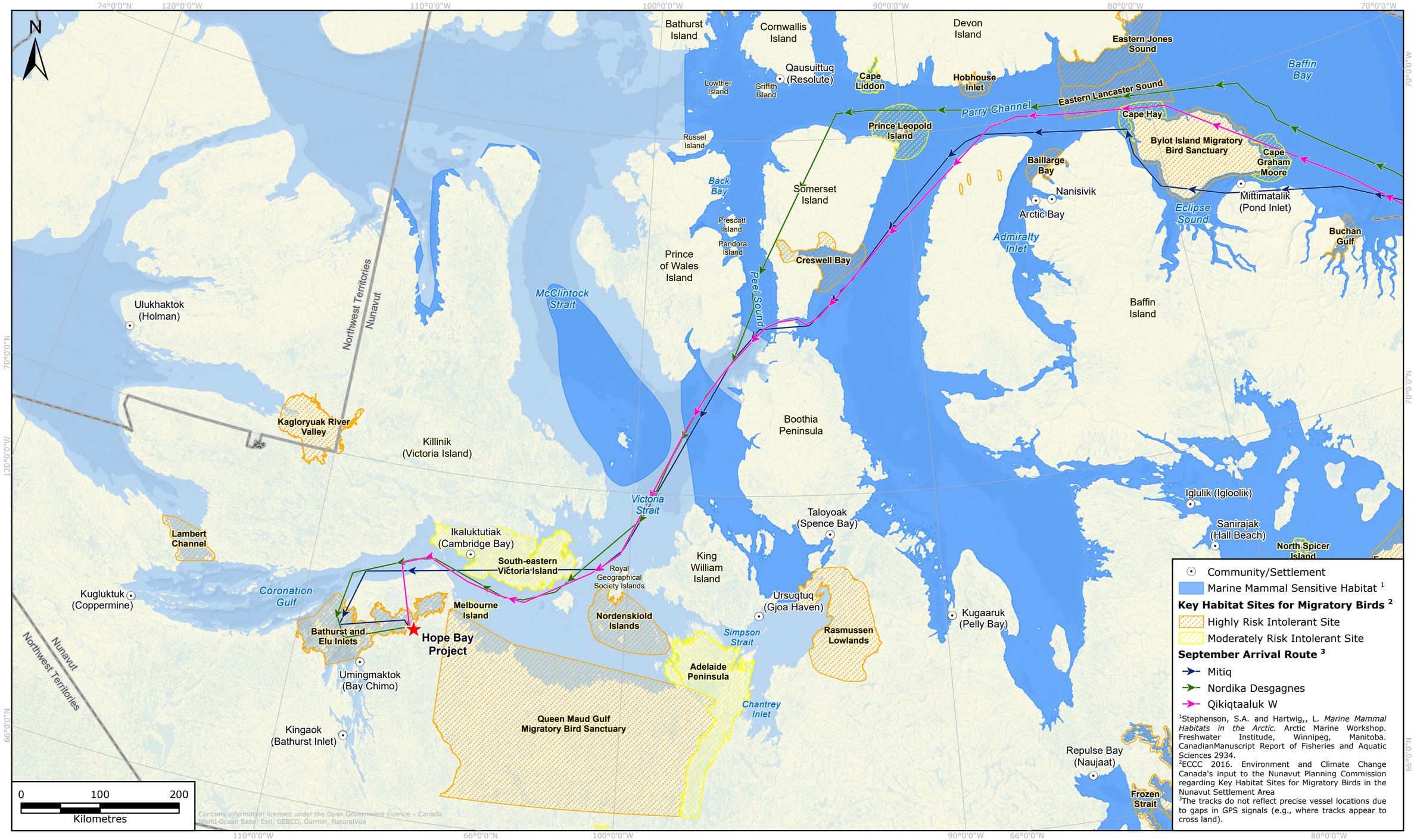
In 2024, three vessels recorded marine wildlife sightings during the shipping season: the Mitiq, the Nordika Desgagnes, and the Qikiqtaaluk W (Appendix AB). No marine wildlife incidents were reported in 2024. Between the three vessels, 15 bearded seals (*Erignathus barbatus*), eight narwhals (*Monodon monoceros*), and seven unidentified seals were recorded. The group of 15 swimming bearded seals was recorded by personnel on the Mitiq, who successfully initiated mitigation action, altering the course to starboard, to provide a minimum 500 m buffer to the bearded seals as per the Shipping Management Plan (Appendix AB). This was the only mitigation action required in response to marine mammal observations in 2024. In addition to marine mammal sightings, incidental sightings of seabirds (i.e., waterbirds) are included in Section 3.10.3.6.

The vessel tracks for all three vessels were summarized to confirm that mitigations for setbacks and designated routes were followed (Figure 3.12-1). The tracks do not reflect precise vessel locations due to gaps in GPS signals (e.g., where tracks appear to cross land). The vessels had no deviations from the nominal shipping routes.

### 3.12.3.3 INTERACTIONS, INCIDENTS, AND MORTALITIES

No marine mammal interactions, incidents, or mortalities were recorded in 2024 (Appendix E).

FIGURE 3.12-1 VESSEL TRACKS DURING SHIPPING SEASON, 2024




[1]Stephenson, S.A. and Hartwig,, L. *Marine Mammal Habitats in the Arctic.* Arctic Marine Workshop. Freshwater Institude, Winnipeg, Manitoba. CanadianManuscript Report of Fisheries and Aquatic Sciences 2934.

[2]ECCC 2016. Environment and Climate Change Canada's input to the Nunavut Planning Commission regarding Key Habitat Sites for Migratory Birds in the Nunavut Settlement Area

[3]The tracks do not reflect precise vessel locations due to gaps in GPS signals (e.g., where tracks appear to cross land).

ERM

CLIENT: Agnico Eagle Mines Ltd.
GIS NUMBER: HB-23-614-08

DATE: 03/17/2025

PROJECTION: Canada Lambert Conformal Conic
SCALE: 1:4,500,000 when printed at 11x17

#### 3.12.3.4 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2024, 13 marine mammals were recorded in the wildlife sightings log (Table 3.12-2; Appendix F). Sightings included two sightings of three ringed seals (likely the same group on separate days), five sightings of a single unidentified seal, and one sighting of two unidentified seals, all within Roberts Bay (Table 3.12-2). No marine mammals were observed incidentally by biologists in 2024 (Appendix G).

TABLE 3.12-2 MARINE MAMMAL SIGHTINGS AND INCIDENTAL OBSERVATIONS, 2024

| General Location | Months | Total Sightings | Total Individuals[a] |
|---|---|---|---|
| Roberts Bay | May–October | 8 | 13 |

Note:
[a] The total number of individuals provided may not always be representative of the true number of individuals recorded, as certain wildlife sightings may include double counting of the same individual(s).

## 3.13 PLANTS

Ongoing monitoring for invasive plants is required by Condition 17 and Commitment GN#04 in Project Certificate No. 009 (NIRB 2018). The WMMP includes invasive plant monitoring along Project infrastructure at 5-year intervals (Agnico Eagle 2023). Monitoring for invasive plants was completed during the baseline for the Madrid-Boston FEIS, and again in 2023. Surveys will be completed again in 2029.

Furthermore, a sedge sampling program for tissue metal concentrations was initiated in 2018. Additional data collection will be discussed when operation of the Madrid and/or Boston areas is underway.

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# APPENDIX A QUARRY BLAST NOISE MONITORING AT HOPE BAY SOP

# Hope Bay Project

## Quarry Blasting Noise Monitoring at Hope Bay

STANDARD OPERATING PROCEDURE

March 2025 Version A.1

| | | |
|---|---|---|
| **Scope of Work:** | This SOP provides guidance for noise monitoring measurement commitments during quarry blasts. | |
| **Associated Documents:** | Appendix A: Acoustical Concepts and Terminology<br>Appendix B: Larson Davis Measurement Setup<br>Appendix C: Noise Baseline Study Field Data Sheet | |
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## CONTENTS



### LIST OF PHOTOS

# 1. BACKGROUND INFORMATION AND OBJECTIVE

Agnico Eagle Mines Limited (Agnico Eagle) has committed to stopping blasting when caribou are within 96 dB LPeak (noise level when blasting; ERM 2019). This threshold for halting blasting was chosen from a review of available literature, which indicates that ungulates may have a freezing or startle response when exposed to 96 dB LPeak overpressure (Manci et al. 1988; Weisenberger et al. 1996; Reimers and Colman 2006). ERM Consultants Canada Ltd. (ERM) completed previous noise modeling in 2019, suggesting that the 96 dB LPeak noise level is reached at 2.8 km from the blast (ERM 2019). Blasting is therefore stopped at the Hope Bay Mine (the Mine) when caribou are within 2.8 km of site. This value was deemed extremely conservative by noise modelers.

The objective of the 2024 noise monitoring is to measure noise levels at 2.8 km from the blasts to confirm previous modeling predictions, as per the Mine's Project's Commitment #41 from the Final Hearing, presented in Appendix B of the Nunavut Impact Review Board (NIRB) Project Certificate (009; NIRB 2018). The Project Commitment states:

- TMAC Resources Inc. (TMAC) will conduct noise measurements during quarry blasts at 2.8 km and 4 km to confirm predictions; and
- TMAC will confirm that the overpressure value of 96 dBZ Lpeak will not exceed at 2,800 m from the location of the blast.

This Noise Monitoring Standard Operating Procedure (SOP) has been developed to guide the stated noise monitoring measurement commitments during quarry blasts. The SOP describes procedures for Agnico Eagle staff to follow to accurately collect noise data, including:

- Required equipment for noise monitoring, the procedure to collect noise measurements in the field, metadata to record in the field, and the procedure for downloading data after monitoring; and
- How to proceed based on noise measurement results and reporting requirements.

Agnico Eagle will update this SOP as necessary in response to data collected in the field or scientific advances, or in response to feedback from stakeholders or regulators, including the Kitikmeot Inuit Association (KIA), Government of Nunavut (GN), or Canadian Wildlife Service (CWS). Acoustical Concepts and Terminology are described in Appendix A for further context.

# 2. SAFETY CONSIDERATIONS

Due safety considerations should be given to each of the following prior to starting work:

- Working at a remote site;
- Working with hand tools;
- Weather;
- Wildlife;
- Slips, trips, and falls; and
- Travel via helicopter or truck.

# 3. EQUIPMENT LIST

Specific equipment for noise monitoring is provided below:

- Larson Davis SoundAdvisor Model 831c;
- SoundAdvisor Portable Noise Monitoring System Model NMS044;
- Larson Davis calibrator (cal200);
- Portable weather station;
- Handheld GPS;
- Digital camera;
- Field datasheet; and
- Writing utensil.

# 4. PROCEDURE

## 4.1 PERSONNEL REQUIREMENTS

Trained technicians will conduct noise monitoring site visits during blasts to ensure that equipment is properly managed and set up, and that proper documentation and field observations are made to identify audible noise sources. Staff responsibilities are as follows:

**Environmental Technician**

- Ensure noise monitoring equipment is fully charged and calibrated.
- Ensure safety conditions are considered and met before commencing field work.

**Environmental Coordinator**

- Provide SOP to field staff for review and assess level of competency of field staff to complete task.
- Provide UTM coordinates and monitoring distance from blast site.

## 4.2 PREPARATION FOR THE FIELD

Prior to leaving the office to conduct noise monitoring, technicians must:

- Check the local weather forecast:
  - Avoid taking measurement in winds >5 m/s (12 mph) or rain (other than light showers). Excessive wind can introduce low frequency noise due to air movement over the windscreen and can result in non-typical noise due to wind in trees. Heavy rain can increase background noise levels. Even light rain can increase tire noise when monitoring near roadways.
- Adapt to site-specific wind conditions:
  - Recognizing that typical site conditions often involve wind speeds above 5 m/s (12 mph); noise measurements will still be conducted under these conditions.

- Given the restriction of one measurement per blast, data collection should be systematically planned. Start by collecting data at 2.8 km from the blast. If wind conditions remain consistently above 5 m/s, progressively reduce the distance of the monitoring site in subsequent blasts, moving 250 m closer each time until measurements are taken as close as 1 km from the blast site.
- The goal is to gather data across all specified distances (2.8 km to 1 km), allowing for a comprehensive understanding of blast noise under varying wind conditions. If wind conditions are below 5 m/s (12 mph), return to collecting data at 2.8 km from the blast.
- Note that if wind is below 12 mph, please monitor at 2.8 km from blast, since this is the distance in the commitment and there is an objective to measure at this distance when the noise is unobstructed/masked by the wind.

- Confirm site access:
  - Arrange for or confirm access to proposed monitoring sites if necessary. Noise data will be collected at sites 2.8 km away from the blast under low wind conditions. Factors to consider in site selection include:
    - Locations that could be affected by nearby construction noise or added noise from nearby personnel, creeks, or any objects able to be moved by wind. These locations should be avoided.
    - Sound reflections off buildings or other solid objects can significantly affect measured levels. Microphone should be at least 3 m away from large reflecting surfaces.
- Ensure equipment readiness:
  - Ensure batteries are charged for sound level meters, cameras, and GPS units.

## 4.3 DEPLOYMENT SETUP

**Step 1: Sound Level Meter Software Program**

Technicians are to follow the procedure outlined in Appendix B of this SOP to properly set up the instrument software program.

**Step 2: Monitoring Station Set-Up**

1. At the prescribed monitoring location (~2.8 km from blast location), set up the microphone using the yellow broom pole and the molded bracket on the side of the pelican case.
2. On the microphone cable, slide the two cable ties up to the microphone grip. Then, slide the microphone with cable ties over the yellow pole as pictured in Photo 1.
3. Using the two pieces of Velcro material on the microphone cable, secure the microphone cable to the yellow pole to prevent wind from rattling the cable on the yellow pole during monitoring.
4. Once the microphone and pole are secure, take photos from all four cardinal directions, depicting both the audio recording gear and the background.

Photo 1 Microphone affixed to vertical pole.

### Step 3: Calibration

1. Remove foam oval windscreen and unscrew bird spike to reveal the microphone.
2. Carefully slide calibration pack hole located on the bottom of the unit over the microphone tip, ensuring that when the unit is placed on a flat surface the entire tip of the microphone is covered.
3. With the unit powered on, select "TOOLS/CALIBRATION."
4. Select 94Db by using the cursor to highlight the dropdown menu.
5. On the calibration pack, press the black button—this starts the tone for the microphone to use as an audial reference tone.
6. On the 831C, use the cursor to highlight "CALIBRATION."
    a. The unit will now enter calibration mode and run a diagnostic. Once calibration is complete, the 831C will prompt you to save—select yes.
    b. Calibration procedure complete.

### Step 4: Field Data

Record all pertinent information using the appropriate field datasheet (Appendix C).

Technicians are to record the following data:

- Project name and field personnel;
- Date and time of setup and tear down;
- Date and time of the blast down to the second[1];

[1]It is advised to check the time settings on the sound level meter and compare them to the device used to record blast times. If these devices are not in sync with one another, it should be noted in the field data sheet.

- Blast location and coordinates;
- UTM coordinates of sampling station;
- Ground cover type and terrain;
- Distance from all obstacles in the area (cannot be closer than 3 m to any surface, except the ground surface);
- Weather conditions at each site at the time of set up and tear down including:
  - Temperature (°C);
  - Relative humidity (%);
  - Cloud cover;
  - Wind speed (km/h or m/s) using handheld wind meter;
  - Wind direction (degrees from true North); and
  - Precipitation (mm).
- Instrument model;
- Calibration information;
- Notable observations including:
  - Audibility of blast; and
  - Additional noise sources (vehicle noise, birds, insects, wind, rain, etc.).
- Photos of the deployed monitoring equipment (showing every direction at each monitoring location).

NOTE—complete a field data sheet even if blasting activities have been suspended. Note pertinent details to keep records of all blasting attempts.

### Step 5: Noise Monitoring Using the SoundAdvisor Model 831C

At the bottom of the 831C screen, there are three menu items:

LIVE CLOSE LOG

1. Select "LIVE" to determine if the microphone is working—audible noise will register indicating the microphone is picking up ambient sounds. IF yes, proceed. IF not, check all connections in the Pelican case, and along the microphone.
2. If the microphone is working, use the arrow keys to select "LOG." Once in the LOG screen, the unit is ready to start recording.
3. Select the Record button 15 minutes prior to blasting. When the blast event is complete, wait another 15 minutes, then press the stop button to cease operation. Data is saved to the internal memory of the unit.
4. Once the meter has been started, try to minimize any noise. It is recommended to leave the area while monitoring is occurring. Attempt to be as quiet as possible while leaving or, if this is not practical, make a note of the time at which you departed from the site. If personnel stay in the area, all engines must be shut off and silence is required.

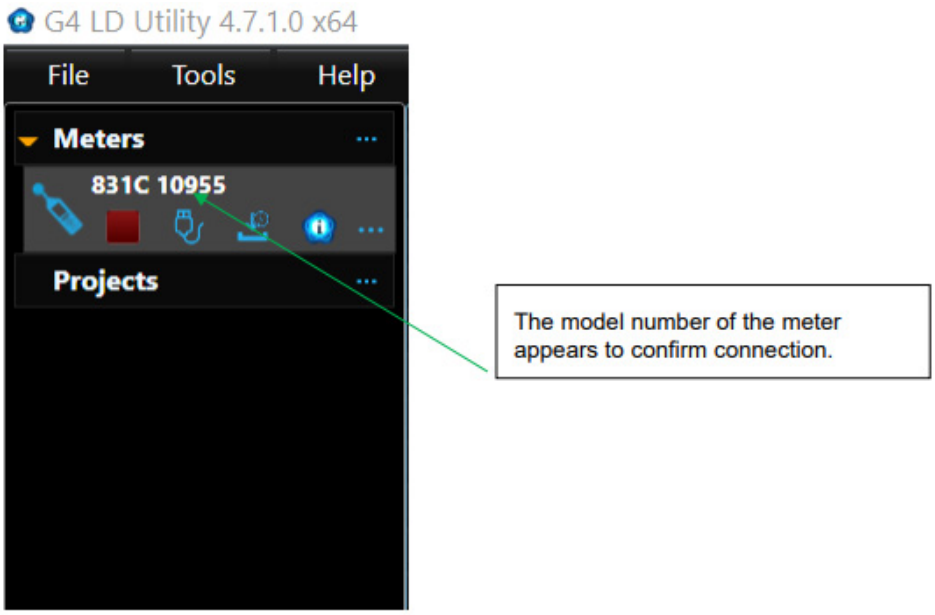
## 4.4 RETRIEVING DATA FROM SOUNDADVISOR MODEL 831C

Interfacing the noise meter requires installation of the G4 LD Utility software and a standard USB cable connecting to either a PC or laptop computer.

With software loaded, open G4 LD Utility application.

**Step 1: Connect Device**

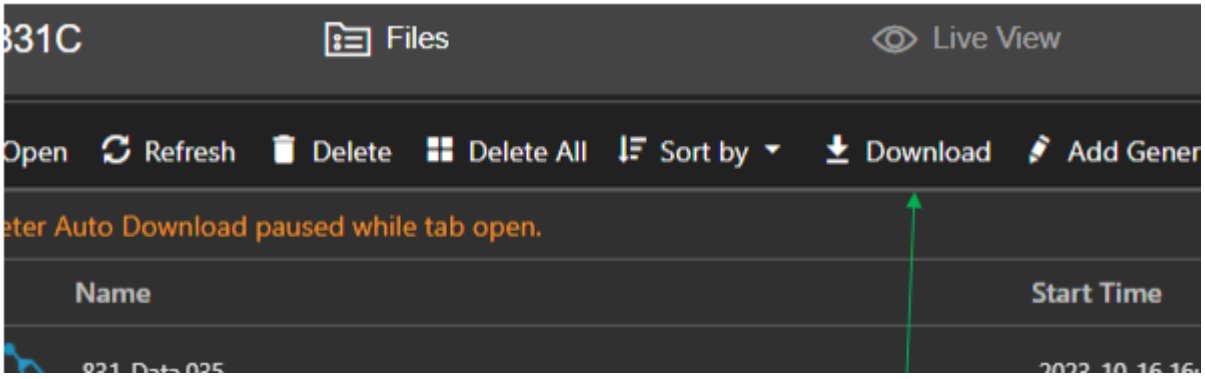
Connect the noise meter to the computer using a standard USB cable. The connected meter model number will appear in the top left corner of the screen.




**Step 2: Select Data Files**

Select the data files from the sampling event from the list on the right side of the screen.

- Once the file(s) are highlighted, select the "Download" option to begin data transfer to the connected computer.
- Navigate to the "Downloads" folder on the PC to retrieve data.



# 5. REPORTING

Agnico Eagle will complete an annual noise monitoring report following data collection. The report is to include a summary of the methods and equipment used to gather noise data, summary tables indicating weather conditions, noise data, graphs of raw noise data, a map showing the location of the monitoring sites, and photos of each site.

Any noise sources that cause noise criteria to be exceeded will be identified in the report. The noise monitoring report will also confirm the distance from the blast where 96 dBZ Lpeak (noise threshold for caribou disturbance) is recorded. The location of the 96 dBZ Lpeak will provide input and potential for further mitigation measures for caribou in the continuously updated Wildlife Mitigation and Monitoring Plan (WMMP).

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# APPENDIX A ACOUSTICAL CONCEPTS AND TERMINOLOGY

## *A.1 GLOSSARY – ACOUSTICAL CONCEPTS AND TERMINOLOGY*

### *A.1.1 What Is Noise And Vibration?*

*Noise*

Noise is often defined as a sound, especially one that is loud or unpleasant or that causes disturbance[1] or simply as unwanted sound, but technically, noise is the perception of a series of compressions and rarefactions above and below normal atmospheric pressure.

*Vibration*

Vibration refers to the oscillating movement of any object. In a sense noise is the movement of air particles and is essentially vibration, though in regards to an environmental assessment vibration is typically taken to refer to the oscillation of a solid object(s). The impact of noise on objects can lead to vibration of the object, or vibration can be experienced by direct transmission through the ground, this is known as ground-borne vibration.

Essentially, noise can be described as what a person hears, and vibration as what they feel.

### *A.1.2 What Factors Contribute To Environmental Noise?*

The noise from an activity, like construction works, at any location can be affected by a number of factors, the most significant being:

- How loud the activity is?
- How far away the activity is from the receiver?
- What type of ground is between the activity and the receiver location e.g. concrete, grass, water or sand?
- How the ground topography varies between the activity and the receiver? For example, is it flat, hilly, mountainous? Blocking the line of sight to a noise source will generally reduce the level of noise.
- Any other obstacles that block the line of sight between the source to receiver e.g. buildings or purpose built noise walls.

[1] Copyright © 2011 Oxford University Press

### *A.1.3 How to Measure and Describe Noise?*

Noise is measured using a specially designed 'sound level' meter which must meet internationally recognised performance standards. Audible sound pressure levels vary across a range of $10^7$ Pascals (Pa), from the threshold of hearing at 20μPa to the threshold of pain at 200Pa. Scientists have defined a statistically described logarithmic scale called Decibels (dB) to more manageably describe noise.

To demonstrate how this scale works, the following points give an indication of how the noise levels and differences are perceived by an average person:

- 0 dB - represents the threshold of human hearing (for a young person with ears in good condition).
- 50 dB – represents average conversation.
- 70 dB – represents average street noise, local traffic etc.
- 90 dB – represents the noise inside an industrial premises or factory.
- 140 dB - represents the threshold of pain – the point at which permanent hearing damage may occur.

### *A.1.4 Human Response to Changes in Noise Levels*

The following concepts offer qualitative guidance in respect of the average response to changes in noise levels:

- Differences in noise levels of less than approximately 2 dB are generally imperceptible in practice, an increase of 2 dB is hardly perceivable.
- Differences in noise levels of around 5 dB are considered to be significant.
- Differences in noise levels of around 10 dB are generally perceived to be a doubling (or halving) of the perceived loudness of the noise. An increase of 10 dB is perceived as twice as loud. Therefore an increase of 20 dB is four times as loud and an increase of 30 dB is eight times as loud etc.
- The addition of two identical noise levels will increase the dB level by about 3 dBA. For example, if one car is idling at 40 dB and then another identical car starts idling next to it, the total dB level will be about 43 dB.
- The addition of a second noise level of similar character which is at least 8 dB lower than the existing noise level will not add significantly to the overall dB level.
- A doubling of the distance between a noise source and a receiver results approximately in a 3 dB decrease for a line source (for example, vehicles

travelling on a road) and a 6 dB decrease for a point source (for example, the idling car discussed above).

- A doubling of traffic volume for a line source results approximately in a 3 dB increase in noise, halving the traffic volume for a line source results approximately in a 3 dB decrease in noise.

### *A.1.5 Terms to Describe the Perception of Noise*

The following terms offer quantitative and qualitative guidance in respect of the audibility of a noise source:

- **Inaudible / Not Audible** - the noise source and/or event could not be heard by the operator, masked by extraneous noise sources not associated with the source. If a noise source is 'inaudible' its noise level may be quantified as being less than the measured $L_{A90}$ background noise level, potentially by 10 dB or greater.

- **Barely Audible –** the noise source and/or event are difficult to define by the operator, typically masked by extraneous noise sources not associated with the source. If a source is 'barely audible' its noise level may be quantified as being 5 - 7 dB below the measured $L_{A90}$ or $L_{Aeq}$ noise level, depending on the nature of the source e.g. constant or intermittent.

- **Just Audible –** the noise source and/or event may be defined by the operator. However there are a number of extraneous noise sources contributing to the measurement. The noise level should be quantified based on instantaneous noise level contributions, noted by the operator.

- **Audible** - the noise source and/or event may be easily defined by the operator. There may be a number of extraneous noise sources contributing to the measurement. The noise level should be quantified based on instantaneous noise level contributions, noted by the operator.

- **Dominant –** the noise source and/or event are noted by the operator to be significantly 'louder' than all other noise sources. The noise level should be quantified based on instantaneous noise level contributions, noted by the operator.

The following terms offer qualitative guidance in respect of acoustic terms used to describe the frequency of occurrence of a noise source during an operator attended environmental noise measurements:

- **Constant –** this indicates that the operator has noted the noise source(s) and/or event to be constantly audible for the duration of the noise measurement e.g. an air-conditioner that runs constantly during the measurement.

- **Intermittent –** this indicates that the operator has noted the noise source(s) and/or event to be audible, stopping and starting intervals for the duration of the noise measurement e.g. car pass-bys.

- **Infrequent** – this indicates that the operator has noted the noise source(s) and/or event to be constantly audible, however; not occurring regularly or at intervals for the duration of the noise measurement e.g. a small number of aircraft are noted during the measurement.

### *A.1.6 How to Calculate or Model Noise Levels?*

There are two recognised methods which are commonly adopted to determine the noise at particular location from a proposed activity. The first is to undertake noise measurements whilst the activity is in progress and measure the noise, the second is to calculate the noise based on known noise emission data for the activity in question.

The second option is preferred as the first option is largely impractical in terms of cost and time constraints, notwithstanding the meteorological factors that may also influence its quantification. Furthermore, it is also generally considered unacceptable to create an environmental impact simply to measure it. In addition, the most effective mitigation measures are determined and implemented during the design phase and often cannot be readily applied during or after the implementation phase of a project.

Because a number of factors can affect how 'loud' a noise is at a certain location, the calculations can be very complex. The influence of other ambient sources and the contribution from a particular source in question can be difficult to ascertain. To avoid these issues, and to quantify the direct noise contribution from a source/site in question, the noise level is often calculated using noise modelling software packages. The noise emission data used in may be obtained from the manufacturer or from ERM's database of measured noise emissions.

### *A.1.7 Acoustic Terminology & Statistical Noise Descriptors*

Environmental noise levels such as noise generated by industry, construction and road traffic are commonly expressed in dBA. The A-weighting scale follows the average human hearing response and enables comparison of the intensity of noise with different frequency characteristics. Time varying noise sources are often described in terms of statistical noise descriptors. The following descriptors are commonly used when assessing noise and are referred to throughout this acoustic assessment:

- **Decibel (dB is the adopted abbreviation for the decibel)** – The unit used to describe sound levels and noise exposure. It is equivalent to 10 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure.

- **dBA** - unit used to measure 'A-weighted' sound pressure levels. A-weighting is an adjustment made to sound-level measurement to approximate the response of the human ear.

- **dBC** – unit used to measure 'C-weighted' sound pressure levels. C-weighting is an adjustment made to sound-level measurements which takes account of low-frequency components of noise within the audibility range of humans.

- **dBZ or dBL** – unit used to measure 'Z-weighted' sound pressure levels with no weighting applied, linear.

- **Hertz (Hz)** - the measure of frequency of sound wave oscillations per second. 1 oscillation per second equals 1 hertz.

- **Octave –** a division of the frequency range into bands, the upper frequency limit.

- **1/3 Octave –** single octave bands divided into three parts.

- **Leq** - this level represents the equivalent or average noise energy during a measurement period. The $L_{eq, 15min}$ noise descriptor simply refers to the $L_{eq}$ noise level calculated over a 15 minute period. Indeed, any of the below noise descriptors may be defined in this way, with an accompanying time period (e.g. $L_{10, 15\ minute}$) as required.

- **Lmax** - the absolute maximum noise level in a noise sample.

- **$L_N$ -** the percentile sound pressure level exceeded for N% of the measurement period calculated by statistical analysis.

- **$L_{10}$ -** the noise level exceeded for 10 per cent of the time and is approximately the average of the maximum noise levels.

- **$L_{90}$** - the noise level exceeded for 90 per cent of the time and is approximately the average of the minimum noise levels. The $L_{90}$ level is often referred to as the "background" noise level and is commonly used as a basis for determining noise criteria for assessment purposes.

- **Sound Power Level ($L_W$)** - this is a measure of the total power radiated by a source. The Sound Power of a source is a fundamental property of the source and is independent of the surrounding environment.

- **Sound Pressure Level ($L_P$)** - the level of sound pressure; as measured at a distance by a standard sound level meter with a microphone. This differs from $L_W$ in that this is the received sound as opposed to the sound 'intensity' at the source.

- **Background noise** – the underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is described using the $L_{A90}$ descriptor.

- **Ambient noise** – the all-encompassing noise associated within a given environment. It is the composite of sounds from many sources, both near and far. This is described using the $L_{Aeq}$ descriptor.

- **Cognitive noise** – noise in which the source is recognised as being annoying.

- **Masking** – the phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.

*Industrial Noise Policy (INP) Terminology*

The following terminology is from the NSW Environment Protection Authority – *NSW Environmental Noise Management – Industrial Noise Policy* (INP), January 2000 and relevant application notes:

- **Assessment Background Level (ABL)** - is defined in the INP as a single figure background level representing each assessment period (day, evening and night). Its determination is by the tenth percentile method (of the measured $L_{A90}$ statistical noise levels) described in Appendix B on the INP.

- **Rating Background Level (RBL)** - is defined in the INP as the overall single figure background level representing each assessment period (day, evening and night) over the whole monitoring period (as opposed to over each 24 hour period used for the ABL). This is the level used for assessment purposes. It is defined as the median value of:

  - All the day assessment background levels over the monitoring period for the day;

  - All the evening assessment background levels over the monitoring period for the evening; or

  - All the night assessment background levels over the monitoring period for the night.

- **Extraneous noise** – noise resulting from activities that are not typical of the area. Atypical INP activities may include construction, and traffic generated by holiday periods and by special events such as concerts or sporting events. Normal daily traffic is not considered to be extraneous.

- **Most affected location(s)** – locations that experience (or will experience) the greatest noise impact from the noise source under consideration. In determining these locations, one needs to consider existing background levels, exact noise source location(s), distance from source (or proposed source) to receiver, and any shielding between source and receiver.

- **Noise criteria** – the general set of non-mandatory noise level targets for protecting against intrusive noise (for example, background noise plus 5 dB) and loss of amenity (for example, noise levels for various land uses).

- **Noise limits** – enforceable noise levels that appear in conditions on consents and licences. The noise limits are based on achievable noise levels which the proponent has predicted can be met during the environmental

assessment. Exceedance of the noise limits can result in the requirement for either the development of noise management plans or legal action.

- **Project Specific Noise Levels** – target noise levels for a particular noise generating facility. They are based on the most stringent of the intrusive criteria or amenity criteria. Which of the two criteria is the most stringent is determined by measuring the level and nature of existing noise in the area surrounding the actual or propose noise generating facility.

- **Compliance** – the process of checking that source noise levels meet with the noise limits in a statutory context.

- **Non-compliance** – development is deemed to be in non-compliance with its noise consent/ licence conditions if the monitored noise levels exceed its statutory noise limit by more than 2 dB.

- **Feasible and Reasonable measures** – feasibility relates to engineering considerations and what is practical to build. reasonableness relates to the application of judgement in arriving at a decision, taking into account the following factors:

  - Noise mitigation benefits (amount of noise reduction provided, number of people protected);

  - Cost of mitigation (cost of mitigation versus benefit provided);

  - Community views (aesthetic impacts and community wishes); and

  - Noise levels for affected land uses (existing and future levels, and changes in noise levels).

- **Meteorological Conditions** – wind and temperature inversion conditions.

- **Temperature Inversion** – an atmospheric condition in which temperature increases with height above the ground.

- **Adverse Weather** – weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).

### *1.1.2 Operator Attended Noise Measurements*

*Table A.1* below presents typical abbreviations that are used to describe common noise sources that may be noted during environmental noise measurements.

***Table A.1 General Field Note Abbreviations***

| Abbreviation | Noise Source |
|---|---|
| ANML (B-I-D-L) | Animals (birds – insects – domestic - livestock) |
| ACF T | Aircraft |
| CPBY | Car pass by |
| DLCN | Dialogue, conversations e.g. with passers-by |
| DTRF | Distant traffic |
| LTRF | Local traffic |
| OIND | Other industry/industrial sites |
| OPTR | Operator |
| RDOC | Residential/occupants |
| RHUM | Rural harm |
| SHUM | Suburban harm |
| UHUM | Urban harm |
| WBVG | Windblown vegetation |

During operator attended noise measurements, the sound level meter will present the instantaneous noise level and record acoustical and statistical parameters. In certain acoustical environments, where a range of noise sources are audible and detectable, the sound level meter cannot measure a direct source noise level and it is often necessary to account for the contribution and duration of the sources.

**Noted Percentile Contribution** – *Table A.2* presents noise level deductions that are typically applied based on the percentage contribution of a noise source(s). **Noted Time Contribution** – *Table A.3* presents noise level deductions that may be applied based on the percentage of time that a noise source(s) is audible during a 15 minute measurement. Where the noise emission from a source is clearly detectable and the contribution can be measured, these deductions are not necessary.

***Table A.2 Noise Level Deductions – Noted Percentile Contribution***

| Percentage Contribution | Noise Level Adjustment, dBA |
|---|---|
| 5% | -13.0 |
| 10% | -10.0 |
| 15% | -8.2 |
| 20% | -7.0 |
| 25% | -6.0 |
| 30% | -5.2 |
| 35% | -4.6 |
| 40% | -4.0 |
| 45% | -3.5 |
| 50% | -3.0 |

| Percentage Contribution | Noise Level Adjustment, dBA |
|---|---|
| 55% | -2.6 |
| 60% | -2.2 |
| 65% | -1.9 |
| 70% | -1.5 |
| 75% | -1.2 |
| 80% | -1.0 |
| 85% | -0.7 |
| 90% | -0.5 |
| 95% | -0.2 |
| 100% | 0.0 |

1. **EXAMPLE:** the measured $L_{Aeq,\ 15\ minute}$ noise level is 49 dB and the site contribution was observed to be 10% of this level (extraneous noise sources were noted to dominate the measurement), therefore the $L_{Aeq,\ 15\ minute}$ noise level deduction is 10 dB, with a resultant noise level contribution of approximately 39 dB.

*Table A.3 Noise Level Deductions – Noted Time Contribution*

| Event Duration (minutes) | Noise Level Adjustment, dBA |
|---|---|
| 1 | -11.8 |
| 2 | -8.8 |
| 3 | -7.0 |
| 4 | -5.7 |
| 5 | -4.8 |
| 6 | -4.0 |
| 7 | -3.3 |
| 8 | -2.7 |
| 9 | -2.2 |
| 10 | -1.8 |
| 11 | -1.3 |
| 12 | -1.0 |
| 13 | -0.6 |
| 14 | -0.3 |
| 15 | 0.0 |

1. **EXAMPLE:** the measured $L_{Aeq,\ 15\ minute}$ noise level contribution of an excavator was noted to be 56 dB, however it was only audible for 6 minutes during the 15 minute measurement period, therefore the $L_{Aeq,\ 15\ minute}$ noise level deduction is 4 dB, with a resultant noise level contribution of approximately 52 dB.

## *A.1 VIBRATION - GLOSSARY OF TERMS, DEFINITIONS AND METHODOLOGY*

### *A.1.1 How to Measure and Control Vibration*

Vibration refers to the oscillating movement of any object. In relation to construction projects, ground-borne vibration is the most likely outcome of works and potentially has three (3) effects on vibration sensitive receivers, these are:

- Ground-borne vibration that may cause annoyance.

- Ground-borne vibration that may have adverse effect on a structure e.g. a building.
- Regenerated noise due to ground-borne vibration.

Each of these potential effects can be assessed in accordance with the relevant standard. Perceptible levels of vibration often create concern for the surrounding community at levels well below structural damage guideline values; this issue needs to be managed as part of the vibration monitoring program.

Vibration is typically measured using specific devices that record the velocity or acceleration at a designated receiver location – usually being the closest premises to works. Modern vibration monitoring devices will typically capture amplitude data for the three (3) orthogonal axes being, the transverse, longitudinal and vertical and also the frequency at which the measured vibration event occurs.

Monitoring of this level of detail enables analysis of significant vibration events to determine compliance with relevant guidelines such as the NSW Department of Environment and Conservation – NSW Environmental Noise Management – *Assessing Vibration: a Technical Guideline* (the NSW vibration guideline), February 2006 and the German Institute for Standardisation – DIN 4150 (1999-02) Part 3 (DIN4150-3) – *Structural Vibration - Effects of Vibration on Structures*.

Vibration propagates in a different manner to noise and can be difficult to control depending on the frequency of the source in question, although identifying the strategy best suited to controlling vibration follows a similar approach to that of noise. This includes elimination, control at the source, control along the propagation path and control at the receiver and/or a combination of these, such as no work/respite periods.

### *A.1.2 Vibration Descriptors*

The following terms are often used to describe measured vibration levels.

- **Parameter** – an attribute with a value - for example, weighting.
- **Particle Velocity** – the instantaneous value of the distance travelled by a particle per unit time in a medium that is displaced from its equilibrium state by the passage of a sound or vibration wave.
- **Peak Component Particle Velocity (PCPV)** – is the highest (maximum or peak) particle velocity which is recorded during a particular vibration event over the three (3) axes. PCPV is measured in the unit, mm/s.
- **Phase** – the relative position of a sound wave to some reference point, the phase of a wave is given in radians, degrees, or fractions of a wavelength.
- **Acceleration** – the change in velocity over time. Acceleration is dependent on the velocity and the frequency of the vibration event (velocity is a

vector), as such acceleration changes in two ways - magnitude and/or direction. Acceleration is measured in the unit, $m/s^2$.

- **Perceptible** – vibration levels that a receiver of building occupant may 'feel'. 0.2mm/s is typically considered to be the human threshold for perception of vibration.

- **Geophone or accelerometer** – the transducer/device typically used to measure vibration.

- **Damage** – is defined in DIN 4150-3 to include minor non-structural effects such as cosmetic damage or superficial cracking in paint or cement render, the enlargement of cracks already present, and the separation of partitions or intermediate walls from load bearing walls.

- **Vibration Dose Value (VDV)** – a concept outlined in the NSW vibration guideline, which is a calculative approach to assessing the impact of intermittent vibration or extended periods of impulsive vibration. VDV require the measurement of the overall weighted RMS (Root Mean Square) acceleration levels over the frequency range 1Hz to 80Hz. To calculate VDV the following formula (refer Section 2.4.1 of the guideline) is used:

$$VDV = \left[ \int_0^T a^4(t)dt \right]^{0.25}$$

  Where VDV is the vibration dose value in $m/s^{1.75}$, $a\ (t)$ is the frequency-weighted RMS of acceleration in $m/s^2$ and $T$ is the total period of the day (in seconds) during which vibration may occur.

- **MIC** - Maximum Instantaneous Charge or explosive charge mass (kg) detonated per delay (any 8ms interval).

- **SD** (m) - The scaled distance for air-blast and ground vibration from the charge to the receiver.

# APPENDIX B LARSON DAVIS MEASUREMENT SETUP

# APPENDIX B: LARSON DAVIS MEASUREMENT SETUP

## Equipment

### *Noise Meter*

Create Measurement Setup (Module 6 in Manual):

- Tools > Setup Manager
- Note the name of the setup file you are editing or make a new setup file. Press **Enter** to name the file and then **Save As > Ok**.
- Use left and right keys to scroll through setup pages.
    - General Tab: file name and description (description is optional)
    - SLM Tab:
        - Frequency Rating: **Z**
        - Detector: **Fast**
        - Peak Weighting: **Z**
        - Integration Method: **Linear**
    - OBA Tab:
        - Bandwidth: **1/1,1/3**
        - Freq. Wt.: **Z**
        - Max. Spec.: **Bin Max.**
        - Spectral Ln.: **On**
    - Ln. Percentiles Tab: make sure there are **10%, 50%, and 90%** percentiles
    - Control Tab:
        - Select Manual Run/Stop or Timed Stop; enable Measurement History checkbox
    - Select preferred exceedance triggers:
        - SPL Trigger: leave default
        - Peak Trigger:
            - Peak 1—96 dB
            - Peak 2—100 dB
            - Peak 3—15 dB
    - Day/Night Settings Tab:
        - Day: **7:00**
        - Evening: **22:00; 0 dB penalty**
        - Night: **22:00; 0dB penalty**
    - Do not need weather data
    - **Close > Yes** to save setup > **Enter** on the name of setup > **Set to Active > Enter**

Set Up Measurement Time History (Module 15 in Manual):

- Tools > Setup Manager > Highlight Setup
    - Time History Tab: **check Enable Time History**

- Period: **100 ms**
- Enable the following Time History options: **Leq, Lpeak, LFmax, and LFmin**
- **Check A, C, and Z weight for Leq, LSmax, LFmax, LSmin, LFmin, 1/3 OBA bandwidth (Leq), and Ln stats**

Set Up Event History (Module 17.1 in Manual):

- Need to verify firmware option 831C-ELA has been installed and enabled on your meter
- Tools > Setup Manager > Highlight the name your Setup
  - Event Triggers Tab:
    - **Add 1/3 octave band as event trigger**
    - **If needed, edit the trigger source and trigger level values**
  - Event History:
    - Minimum Duration: **1 second**
    - Continuation Period: **do not select one**
    - Enable Event Time History:
      - Period: **2 seconds**
      - Spectral Mode: **On**
      - Pre/Post Event: **10 and 10**
      - Event Samples: **1000**
    - Trigger Method: **Dynamic**
    - Spectral Tab:
      - **Select On from Spectral Mode dropdown**
- Close and save setup, enter the Setup Manager, highlight the name of the Event History setup, and set it as the Active setup file

# APPENDIX C NOISE BASELINE STUDY FIELD DATA SHEET

# Noise Baseline Study Field Data Sheet

Samplers: KW / RS

Project Name: HOPE BAY

Blast ID (ie: 24-13-DD/MM/YYYY ~~DD/07/2024~~ 24-20-27/07/2024

Blast Location : Quarry D

Blast Coordinates: UTM Coordinates :
13W 0432946 E 7551638 N

Ground Cover (e.g. soil/vegetation type): Dwarf shrub, sedge, grass

Start Date/Time 27-07-24 16:51:30

Terrain (e.g. flat, hills, mountains): Rocky outcrop, rolling

Finish Date/Time 27-07-24 17:03

Weather:

Temperature (°C): 6.9 Cloud Cover (%): 100%

Precipitation: ☐ Heavy ☐ Moderate ☐ Mild ☒ None

☐ Snow ☐ Rain ☐ Other

Wind: Speed ☐ Strong ☑ ~~Moderate~~ ☐ Light ☐ None 23.5km/h Direction E

Instrument:

Type Sound Advisor 831C Serial # x

Calibration: ☑ Before ☐ After Method x

Weighting (i.e. A) x Other Settings x

Response (i.e. fast/slow) x x

Observations: **Include directions and estimated distances to the instrument in this section **

Audible noise observed Talking, paper, rocks, ~~vehicle~~, radio chatter wind, foot steps, flags

Potential noise sources Vehicles, wind, footsteps, talking radio, animals (birds), helicopter, flags

Obstacles (e.g. trees, buildings) Rocky out crops, hills

Notes:

- strong wind gusts while recording

BLAST DATE AND TIME: 27-07-24 17:01:05

WILDLIFE SURVEY COMPLETED? (YES) NO

NOISE MONITORING UTM 13W 0432317 E 7554312 N

**PIease be sure to take a few photos of the instrument and the surrounding area (i.e. one in each direction) and put them in the project folder with appropriate labels upon return to the office!**

# APPENDIX B WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, DORIS AND MADRID AREAS, AND BOSTON AREA, 2016 TO 2024

APPENDIX B1: WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera_ID | Zone | Easting | Northing | CamBearing | CamDegrees | Boundary | Specific Monitoring Objective | September | October | November | December | January | Febuary | March | April |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 W | 432949 | 7558756 | SE | 150 | Treatment | - | 30 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 13 W | 432387 | 7553947 | N | 0 | Treatment | Road Crossing Ramp | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 13 W | 444031 | 7566975 | NW | 310 | Control | - | 30 | 17 | 0 | 9 | 31 | 23 | 29 | 28 |
| 4 | 13 W | 444861 | 7564091 | W | 270 | Control | - | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 13 W | 450151 | 7565854 | E | 82 | Control | - | 30 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 13 W | 448290 | 7567418 | E | 78 | Control | - | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 13 W | 446995 | 7560826 | N | 12 | Control | - | 30 | 22 | 1 | 1 | 20 | 24 | 11 | 27 |
| 8 | 13 W | 446453 | 7567249 | W | 276 | Control | - | 28 | 18 | 0 | 0 | 4 | 11 | 1 | 9 |
| 9 | 13 W | 421674 | 7551536 | S | 180 | Control | - | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 13 W | 429000 | 7563795 | SW | 210 | ZOI | - | 32 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 13 W | 434312 | 7561671 | SE | 135 | Treatment | - | 30 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 13 W | 428170 | 7550169 | S | 164 | ZOI | - | 30 | 14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 13 W | 431162 | 7549789 | S | 160 | Treatment | - | 30 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 13 W | 441096 | 7559506 | W | 270 | ZOI | - | 29 | 19 | 10 | 7 | 22 | 26 | 31 | 30 |
| 15 | 13 W | 434048 | 7559949 | S | 188 | Treatment | - | 32 | 31 | 30 | 29 | 31 | 24 | 31 | 30 |
| 16 | 13 W | 445286 | 7563652 | NW | 314 | Control | - | 30 | 31 | 26 | 14 | 30 | 29 | 31 | 30 |
| 17 | 13 W | 432414 | 7563015 | NW | 298 | Treatment | - | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 13 W | 432884 | 7563146 | E | 76 | Treatment | Waste Management Facility | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 13 W | 433432 | 7562946 | W | 288 | Treatment | - | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 13 W | - | - | - | - |  | Culvert Crossing | 28 | 31 | 22 | 5 | 15 | 18 | 15 | 0 |
| 21 | 13 W | 432902 | 7563215 | S | 190 | Treatment | Waste Management Facility | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 22 | 13 W | 435190 | 7562859 | SE | 152 | Treatment | ERM Fish Fence | 30 | 27 | 26 | 27 | 21 | 19 | 31 | 30 |
| 23 | 13 W | 440934 | 7562091 | E | 76 | ZOI | - | 3 | 17 | 17 | 0 | 0 | 0 | 0 | 0 |
| 24 | 13 W | 432915 | 7546879 | SE | 140 | ZOI/Ladder | - | 30 | 31 | 30 | 31 | 8 | 3 | 19 | 15 |
| 25 | 13 W | 439189 | 7561613 | SW | 220 | ZOI | - | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 13 W | 439511 | 7559524 | E | 108 | ZOI | - | 8 | 16 | 1 | 0 | 0 | 0 | 0 | 0 |
| 27 | 13 W | - | - | - | - | - | Culvert Crossing | 34 | 29 | 13 | 5 | 12 | 20 | 31 | 30 |
| 28 | 13 W | 437525 | 7555177 | SE | 132 | Treatment | - | 29 | 31 | 29 | 26 | 31 | 27 | 16 | 15 |
| 29 | 13 W | 447664 | 7555608 | E | 110 | Control | - | 30 | 14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 13 W | 436434 | 7551376 | NE | 40 | ZOI | - | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 13 W | 447294 | 7558194 | SE | 142 | Control | - | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 13 W | 431386 | 7554959 | E | 82 | Treatment | - | 30 | 31 | 20 | 4 | 7 | 10 | 13 | 0 |
| 33 | 13 W | 446370 | 7566101 | S | 162 | Control | - | 30 | 31 | 1 | 0 | 0 | 0 | 0 | 0 |
| 34 | 13 W | 435945 | 7545070 | NE | 50 | ZOI/Ladder | - | 30 | 31 | 22 | 21 | 17 | 26 | 31 | 30 |
| 35 | 13 W | - | - | - | - | - | Road Crossing Ramp | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 13 W | 432743 | 7556706 | E | 88 | Treatment | - | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 13 W | 447689 | 7563809 | N | 350 | Control | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 13 W | 447868 | 7573293 | NE | 62 | Control | - | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 13 W | 439855 | 7553886 | NE | 62 | ZOI | - | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 13 W | 449306 | 7559369 | NW | 328 | Control | - | 30 | 20 | 0 | 0 | 1 | 7 | 11 | 27 |
| 41 | 13 W | 436856 | 7564792 | SE | 114 | ZOI | - | 16 | 8 | 0 | 0 | 0 | 1 | 6 | 0 |
| 42 | 13 W | 432858 | 7561589 | S | 192 | Treatment | - | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 43 | 13 W | 447488 | 7561980 | W | 258 | Control | - | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 13 W | 441011 | 7563691 | S | 198 | ZOI | - | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

APPENDIX B1: WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera_ID | Zone | Easting | Northing | CamBearing | CamDegrees | Boundary | Specific Monitoring Objective | May | June | July | August | Total | Average | Standard Deviation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 W | 432949 | 7558756 | SE | 150 | Treatment | - | 0 | 21 | 31 | 31 | **7991981** | 499498.8 | 1825689.1 | 1825689.1 |
| 2 | 13 W | 432387 | 7553947 | N | 0 | Treatment | Road Crossing Ramp | 0 | 21 | 31 | 31 | **7986423** | 499151.4 | 1824531.4 | 1824531.4 |
| 3 | 13 W | 444031 | 7566975 | NW | 310 | Control | - | 6 | 23 | 31 | 30 | **8011576** | 500723.5 | 1827646.9 | 1827646.9 |
| 4 | 13 W | 444861 | 7564091 | W | 270 | Control | - | 0 | 0 | 0 | 0 | **8009242** | 500577.6 | 1826953.2 | 1826953.2 |
| 5 | 13 W | 450151 | 7565854 | E | 82 | Control | - | 0 | 22 | 0 | 0 | **8016156** | 501009.8 | 1827371.9 | 1827371.9 |
| 6 | 13 W | 448290 | 7567418 | E | 78 | Control | - | 0 | 23 | 31 | 18 | **8015880** | 500992.5 | 1827752.8 | 1827752.8 |
| 7 | 13 W | 446995 | 7560826 | N | 12 | Control | - | 7 | 23 | 31 | 30 | **8008067** | 500504.2 | 1826161.0 | 1826161.0 |
| 8 | 13 W | 446453 | 7567249 | W | 276 | Control | - | 20 | 0 | 0 | 0 | **8014077** | 500879.8 | 1827711.8 | 1827711.8 |
| 9 | 13 W | 421674 | 7551536 | S | 180 | Control | - | 0 | 0 | 0 | 0 | **7973416** | 498338.5 | 1823973.1 | 1823973.1 |
| 10 | 13 W | 429000 | 7563795 | SW | 210 | ZOI | - | 0 | 22 | 31 | 31 | **7993144** | 499571.5 | 1826914.9 | 1826914.9 |
| 11 | 13 W | 434312 | 7561671 | SE | 135 | Treatment | - | 0 | 22 | 31 | 6 | **7996231** | 499764.4 | 1826391.0 | 1826391.0 |
| 12 | 13 W | 428170 | 7550169 | S | 164 | ZOI | - | 0 | 0 | 0 | 1 | **7978560** | 498660.0 | 1823626.1 | 1823626.1 |
| 13 | 13 W | 431162 | 7549789 | S | 160 | Treatment | - | 0 | 22 | 31 | 30 | **7981250** | 498828.1 | 1823525.8 | 1823525.8 |
| 14 | 13 W | 441096 | 7559506 | W | 270 | ZOI | - | 31 | 30 | 31 | 30 | **8001182** | 500073.9 | 1825847.7 | 1825847.7 |
| 15 | 13 W | 434048 | 7559949 | S | 188 | Treatment | - | 31 | 30 | 31 | 31 | **7994561** | 499660.1 | 1825970.0 | 1825970.0 |
| 16 | 13 W | 445286 | 7563652 | NW | 314 | Control | - | 31 | 8 | 0 | 0 | **8009528** | 500595.5 | 1826841.2 | 1826841.2 |
| 17 | 13 W | 432414 | 7563015 | NW | 298 | Treatment | - | 0 | 20 | 31 | 31 | **7995839** | 499739.9 | 1826717.3 | 1826717.3 |
| 18 | 13 W | 432884 | 7563146 | E | 76 | Treatment | Waste Management Facility | 0 | 21 | 31 | 31 | **7996217** | 499763.6 | 1826751.7 | 1826751.7 |
| 19 | 13 W | 433432 | 7562946 | W | 288 | Treatment | - | 0 | 21 | 31 | 31 | **7996774** | 499798.4 | 1826698.5 | 1826698.5 |
| 20 | 13 W | - | - | - | - | - | Culvert Crossing | 0 | 21 | 13 | 0 | **188** | 14.5 | 10.1 | 10.1 |
| 21 | 13 W | 432902 | 7563215 | S | 190 | Treatment | Waste Management Facility | 15 | 0 | 0 | 8 | **7996358** | 499772.4 | 1826767.4 | 1826767.4 |
| 22 | 13 W | 435190 | 7562859 | SE | 152 | Treatment | ERM Fish Fence | 18 | 22 | 7 | 0 | **7998481** | 499905.1 | 1826673.0 | 1826673.0 |
| 23 | 13 W | 440934 | 7562091 | E | 76 | ZOI | - | 0 | 23 | 31 | 5 | **8003220** | 500201.3 | 1826479.2 | 1826479.2 |
| 24 | 13 W | 432915 | 7546879 | SE | 140 | ZOI/Ladder | - | 31 | 21 | 0 | 0 | **7980177** | 498761.1 | 1822817.1 | 1822817.1 |
| 25 | 13 W | 439189 | 7561613 | SW | 220 | ZOI | - | 0 | 23 | 31 | 1 | **8001107** | 500069.2 | 1826365.4 | 1826365.4 |
| 26 | 13 W | 439511 | 7559524 | E | 108 | ZOI | - | 0 | 23 | 31 | 1 | **7999249** | 499953.1 | 1825861.5 | 1825861.5 |
| 27 | 13 W | - | - | - | - | - | Culvert Crossing | 31 | 30 | 31 | 31 | **324** | 24.9 | 8.9 | 8.9 |
| 28 | 13 W | 437525 | 7555177 | SE | 132 | Treatment | - | 0 | 23 | 31 | 31 | **7993151** | 499571.9 | 1824811.2 | 1824811.2 |
| 29 | 13 W | 447664 | 7555608 | E | 110 | Control | - | 0 | 0 | 0 | 0 | **8003455** | 500215.9 | 1824900.0 | 1824900.0 |
| 30 | 13 W | 436434 | 7551376 | NE | 40 | ZOI | - | 0 | 23 | 31 | 2 | **7987940** | 499246.3 | 1823900.4 | 1823900.4 |
| 31 | 13 W | 447294 | 7558194 | SE | 142 | Control | - | 0 | 23 | 31 | 30 | **8005749** | 500359.3 | 1825524.2 | 1825524.2 |
| 32 | 13 W | 431386 | 7554959 | E | 82 | Treatment | - | 0 | 22 | 31 | 25 | **7986652** | 499165.8 | 1824774.6 | 1824774.6 |
| 33 | 13 W | 446370 | 7566101 | S | 162 | Control | - | 0 | 0 | 0 | 0 | **8012728** | 500795.5 | 1827436.6 | 1827436.6 |
| 34 | 13 W | 435945 | 7545070 | NE | 50 | ZOI/Ladder | - | 18 | 23 | 31 | 30 | **7981409** | 498838.1 | 1822373.1 | 1822373.1 |
| 35 | 13 W | - | - | - | - | - | Road Crossing Ramp | 0 | 21 | 31 | 31 | **119** | 9.2 | 13.9 | 13.9 |
| 36 | 13 W | 432743 | 7556706 | E | 88 | Treatment | - | 0 | 0 | 0 | 0 | **7989579** | 499348.7 | 1825196.7 | 1825196.7 |
| 37 | 13 W | 447689 | 7563809 | N | 350 | Control | - | 0 | 23 | 23 | 0 | **8011931** | 500745.7 | 1826877.3 | 1826877.3 |
| 38 | 13 W | 447868 | 7573293 | NE | 62 | Control | - | 0 | 23 | 31 | 13 | **8021332** | 501333.3 | 1829173.2 | 1829173.2 |
| 39 | 13 W | 439855 | 7553886 | NE | 62 | ZOI | - | 0 | 23 | 31 | 31 | **7993937** | 499621.1 | 1824498.7 | 1824498.7 |
| 40 | 13 W | 449306 | 7559369 | NW | 328 | Control | - | 27 | 30 | 31 | 30 | **8009257** | 500578.6 | 1825799.0 | 1825799.0 |
| 41 | 13 W | 436856 | 7564792 | SE | 114 | ZOI | - | 0 | 21 | 0 | 0 | **8001855** | 500115.9 | 1827140.3 | 1827140.3 |
| 42 | 13 W | 432858 | 7561589 | S | 192 | Treatment | - | 0 | 0 | 0 | 0 | **7994686** | 499667.9 | 1826374.6 | 1826374.6 |
| 43 | 13 W | 447488 | 7561980 | W | 258 | Control | - | 0 | 23 | 31 | 30 | **8009857** | 500616.1 | 1826436.5 | 1826436.5 |
| 44 | 13 W | 441011 | 7563691 | S | 198 | ZOI | - | 0 | 23 | 31 | 30 | **8005032** | 500314.5 | 1826863.4 | 1826863.4 |

APPENDIX B1: WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera_ID | Zone | Easting | Northing | CamBearing | CamDegrees | Boundary | Specific Monitoring Objective | September | October | November | December | January | Febuary | March | April |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 13 W | 443663 | 7571970 | N | 2 | Control | - | 10 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 46 | 13 W | 442904 | 7560551 | N | 8 | ZOI | - | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 47 | 13 W | 442470 | 7550873 | E | 100 | ZOI | - | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 13 W | 443980 | 7554761 | NW | 308 | ZOI | - | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 49 | 13 W | 445024 | 7565168 | S | 180 | Control | - | 30 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | 13 W | 434645 | 7553626 | NE | 40 | Treatment | - | 31 | 31 | 16 | 12 | 7 | 19 | 22 | 0 |
| 51 | 13 W | 435488 | 7555990 | E | 81 | Treatment | - | 30 | 19 | 4 | 0 | 0 | 10 | 8 | 26 |
| 52 | 13 W | 434501 | 7559084 | NW | 308 | Treatment | - | 30 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53 | 13 W | 431215 | 7559161 | W | 258 | Treatment | - | 32 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | 13 W | 430564 | 7558687 | SE | 120 | Treatment | - | 32 | 31 | 22 | 22 | 31 | 27 | 29 | 30 |
| 55 | 13 W | 428287 | 7554559 | N | 8 | ZOI | - | 28 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 13 W | 419347 | 7547495 | N | 345 | Control | - | 30 | 28 | 11 | 20 | 24 | 27 | 31 | 30 |
| 57 | 13 W | 427342 | 7552318 | SW | 204 | ZOI | - | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 58 | 13 W | 421708 | 7545207 | N | 20 | Control | - | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 59 | 13 W | 431411 | 7564176 | E | 100 | Treatment | - | 9 | 18 | 28 | 17 | 0 | 23 | 24 | 0 |
| 60 | 13 W | 433982 | 7564662 | S | 160 | Treatment | - | 30 | 14 | 27 | 5 | 0 | 0 | 0 | 0 |
| **Total** | | | | | | | | **7973416.0** | **15946815.0** | **16445153.5** | **18269126.6** | **20093099.7** | **20093099.7** | **20093099.7** | **20093099.7** |
| **Average** | | | | | | | | **19.2** | **12.1** | **5.9** | **4.3** | **5.2** | **6.2** | **7.0** | **6.6** |
| **Standard Deviation** | | | | | | | | **11.8** | **11.8** | **10.2** | **8.5** | **9.9** | **10.1** | **11.5** | **11.6** |

APPENDIX B1: WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera_ID | Zone | Easting | Northing | CamBearing | CamDegrees | Boundary | Specific Monitoring Objective | May | June | July | August | Total | Average | Standard Deviation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 13 W | 443663 | 7571970 | N | 2 | Control | - | 0 | 22 | 22 | 0 | **8015740** | 500983.8 | 1828862.5 | 1828862.5 |
| 46 | 13 W | 442904 | 7560551 | N | 8 | ZOI | - | 0 | 23 | 31 | 30 | **8003599** | 500224.9 | 1826104.0 | 1826104.0 |
| 47 | 13 W | 442470 | 7550873 | E | 100 | ZOI | - | 0 | 23 | 31 | 31 | **7993582** | 499598.9 | 1823764.6 | 1823764.6 |
| 48 | 13 W | 443980 | 7554761 | NW | 308 | ZOI | - | 0 | 23 | 31 | 31 | **7999189** | 499949.3 | 1824697.6 | 1824697.6 |
| 49 | 13 W | 445024 | 7565168 | S | 180 | Control | - | 0 | 23 | 31 | 6 | **8010524** | 500657.8 | 1827212.4 | 1827212.4 |
| 50 | 13 W | 434645 | 7553626 | NE | 40 | Treatment | - | 7 | 30 | 31 | 31 | **7988598** | 499287.4 | 1824444.7 | 1824444.7 |
| 51 | 13 W | 435488 | 7555990 | E | 81 | Treatment | - | 31 | 30 | 31 | 31 | **7991830** | 499489.4 | 1825013.7 | 1825013.7 |
| 52 | 13 W | 434501 | 7559084 | NW | 308 | Treatment | - | 0 | 24 | 31 | 31 | **7994074** | 499629.6 | 1825761.2 | 1825761.2 |
| 53 | 13 W | 431215 | 7559161 | W | 258 | Treatment | - | 0 | 22 | 31 | 31 | **7990816** | 499426.0 | 1825788.2 | 1825788.2 |
| 54 | 13 W | 430564 | 7558687 | SE | 120 | Treatment | - | 18 | 22 | 31 | 31 | **7989751** | 499359.4 | 1825674.1 | 1825674.1 |
| 55 | 13 W | 428287 | 7554559 | N | 8 | ZOI | - | 0 | 22 | 31 | 30 | **7983027** | 498939.2 | 1824687.4 | 1824687.4 |
| 56 | 13 W | 419347 | 7547495 | N | 345 | Control | - | 16 | 29 | 31 | 13 | **7967533** | 497970.8 | 1822994.3 | 1822994.3 |
| 57 | 13 W | 427342 | 7552318 | SW | 204 | ZOI | - | 0 | 22 | 31 | 30 | **7980013** | 498750.8 | 1824145.2 | 1824145.2 |
| 58 | 13 W | 421708 | 7545207 | N | 20 | Control | - | 0 | 22 | 31 | 13 | **7967074** | 497942.1 | 1822444.2 | 1822444.2 |
| 59 | 13 W | 431411 | 7564176 | E | 100 | Treatment | - | 0 | 0 | 0 | 0 | **7995865** | 499741.6 | 1827002.5 | 1827002.5 |
| 60 | 13 W | 433982 | 7564662 | S | 160 | Treatment | - | 0 | 22 | 31 | 11 | **7999004** | 499937.8 | 1827112.6 | 1827112.6 |
| **Total** | | | | | | | | **12119700.7** | **12119700.7** | **12119700.7** | **12119700.7** | - | - | - | - |
| **Average** | | | | | | | | **5.6** | **19.2** | **22.8** | **17.4** | - | - | - | - |
| **Standard Deviation** | | | | | | | | **10.5** | **9.2** | **13.2** | **14.0** | - | - | - | - |

APPENDIX B2: WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, BOSTON AREA, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera_ID | Zone | Easting | Northing | Region | September | October | November | December | January | Febuary | March | April | May | June | July | August | Total | Average | Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | 13 W | 440082 | 7501581 | Boston | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** | **0.5833333** | **2.628736657** |
| 62 | 13 W | 442288 | 7503273 | Boston | 28 | 31 | 30 | 31 | 31 | 29 | 31 | 7 | 0 | 0 | 0 | 0 | **218** | **18.166667** | **57.24161567** |
| 63 | 13 W | 444896 | 7505844 | Boston | 29 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **42** | **3.5** | **13.63583138** |
| 64 | 13 W | 439604 | 7505408 | Boston | 28 | 14 | 8 | 22 | 31 | 29 | 31 | 28 | 14 | 0 | 0 | 0 | **205** | **17.083333** | **53.51419653** |
| 65 | 13 W | 443058 | 7505120 | Boston | 23 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **36** | **3** | **11.52978306** |
| 66 | 13 W | 434245 | 7504326 | Boston | 28 | 24 | 14 | 25 | 31 | 29 | 31 | 30 | 9 | 0 | 0 | 0 | **221** | **18.416667** | **57.54563407** |
| 67 | 13 W | 453089 | 7505921 | Boston | 17 | 28 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **73** | **6.0833333** | **21.49865828** |
| 69 | 13 W | 450853 | 7500107 | Boston | 28 | 20 | 0 | 22 | 31 | 26 | 22 | 0 | 0 | 0 | 0 | 0 | **149** | **12.416667** | **39.95718863** |
| 70 | 13 W | 450122 | 7506525 | Boston | 29 | 22 | 0 | 8 | 9 | 0 | 6 | 24 | 29 | 22 | 0 | 0 | **149** | **12.416667** | **39.55683999** |
| 71 | 13 W | 461376 | 7500648 | Boston | 26 | 18 | 1 | 0 | 20 | 29 | 25 | 4 | 0 | 0 | 0 | 0 | **123** | **10.25** | **33.36280748** |
| 72 | 13 W | 456525 | 7501877 | Boston | 26 | 19 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **48** | **4** | **14.82418329** |
| 73 | 13 W | 455746 | 7502601 | Boston | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0.0833333** | **0.375533808** |
| 74 | 13 W | 426795 | 7509860 | Boston | 17 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **30** | **2.5** | **9.491561704** |
| 75 | 13 W | 453401 | 7498310 | Boston | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0.0833333** | **0.375533808** |
| 76 | 13 W | 438162 | 7519971 | Boston | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** | **0.4166667** | **1.87766904** |
| 77 | 13 W | 436435 | 7528746 | Boston | 29 | 29 | 18 | 10 | 18 | 17 | 31 | 30 | 31 | 30 | 31 | 27 | **301** | **25.083333** | **76.84116151** |
| 78 | 13 W | 435081 | 7538568 | Boston | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **19** | **1.5833333** | **7.135142354** |
| 79 | 13 W | 435283 | 7541099 | Boston | 21 | 31 | 24 | 17 | 26 | 29 | 31 | 30 | 22 | 0 | 0 | 0 | **231** | **19.25** | **59.91051019** |
| 80 | 13 W | 434607 | 7542626 | Boston | 29 | 31 | 22 | 10 | 21 | 26 | 31 | 30 | 26 | 8 | 2 | 20 | **256** | **21.333333** | **65.75147459** |
| 81 | 13 W | 443808 | 7507764 | Boston | 29 | 23 | 13 | 0 | 0 | 0 | 6 | 20 | 0 | 0 | 0 | 0 | **91** | **7.5833333** | **25.34429587** |
| 82 | 13 W | 435010 | 7531115 | Boston | 29 | 20 | 23 | 15 | 29 | 29 | 25 | 26 | 17 | 0 | 0 | 0 | **213** | **17.75** | **55.28434656** |
| 83 | 13 W | 433178 | 7547175 | Boston | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6** | **0.5** | **2.253202849** |
| 84 | 13 W | 435180 | 7540149 | Boston | 29 | 23 | 5 | 20 | 30 | 26 | 25 | 28 | 17 | 0 | 0 | 0 | **203** | **16.916667** | **52.91369364** |
| 85 | 13 W | 434845 | 7534523 | Boston | 24 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **33** | **2.75** | **10.84328931** |
| 86 | 13 W | 435055 | 7531953 | Boston | 19 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **32** | **2.6666667** | **10.16088528** |
| 87 | 13 W | 438178 | 7523516 | Boston | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** | **0.4166667** | **1.87766904** |
| 88 | 13 W | 440228 | 7514033 | Boston | 11 | 7 | 17 | 17 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | **69** | **5.75** | **18.93206478** |
| 89 | 13 W | 443246 | 7510847 | Boston | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** | **0.4166667** | **1.690850188** |
| **Total** | | | | | **547** | **402** | **205** | **198** | **293** | **270** | **295** | **257** | **165** | **60** | **33** | **47** | **-** | **-** | **-** |
| **Average** | | | | | **19.5357143** | **14.3571429** | **7.32142857** | **7.07142857** | **10.4642857** | **9.64285714** | **10.5357143** | **9.17857143** | **5.89285714** | **2.14285714** | **1.17857143** | **1.67857143** | **-** | **-** | **-** |
| **Standard Deviation** | | | | | **96.7459868** | **71.5415946** | **37.404337** | **36.1121585** | **53.1006717** | **49.203598** | **53.5686964** | **46.9129028** | **30.6745023** | **12.5278287** | **8.10234769** | **10.227263** | **-** | **-** | **-** |

# APPENDIX C CAMERA SUMMARY OF WILDLIFE EVENTS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

## APPENDIX C: CAMERA SUMMARY OF WILDLIFE EVENTS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Caribou | Grizzly Bear | Wolverine | Muskox | Other Wildlife |
|---|---|---|---|---|---|
| 1 | 13 | 0 | 0 | 0 | 19 |
| 2 | 3 | 0 | 0 | 0 | 0 |
| 3 | 9 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 1 |
| 5 | 3 | 0 | 0 | 0 | 1 |
| 6 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 1 | 0 | 0 | 1 |
| 8 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 1 | 0 | 0 | 2 |
| 10 | 10 | 1 | 0 | 0 | 1 |
| 11 | 10 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 1 |
| 13 | 2 | 2 | 0 | 0 | 0 |
| 14 | 4 | 0 | 0 | 0 | 16 |
| 15 | 6 | 0 | 0 | 0 | 7 |
| 16 | 4 | 0 | 0 | 0 | 3 |
| 17 | 0 | 0 | 0 | 0 | 5 |
| 18 | 15 | 1 | 0 | 0 | 0 |
| 19 | 7 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 1 |
| 22 | 10 | 2 | 0 | 0 | 9 |
| 23 | 3 | 0 | 0 | 0 | 3 |
| 24 | 0 | 0 | 0 | 0 | 9 |
| 25 | 8 | 1 | 0 | 0 | 1 |
| 26 | 8 | 2 | 0 | 0 | 2 |
| 28 | 6 | 0 | 0 | 0 | 6 |
| 29 | 1 | 0 | 0 | 0 | 0 |
| 30 | 9 | 1 | 0 | 0 | 2 |
| 31 | 0 | 1 | 0 | 0 | 0 |
| 32 | 14 | 0 | 0 | 0 | 11 |
| 33 | 2 | 1 | 0 | 0 | 0 |
| 34 | 4 | 0 | 0 | 0 | 2 |
| 35 | 0 | 0 | 0 | 0 | 4 |
| 36 | 1 | 1 | 0 | 0 | 0 |
| 37 | 0 | 0 | 0 | 2 | 0 |
| 39 | 4 | 0 | 0 | 0 | 0 |
| 40 | 4 | 4 | 0 | 3 | 0 |
| 41 | 1 | 0 | 0 | 0 | 1 |
| 42 | 1 | 2 | 0 | 0 | 0 |
| 43 | 1 | 0 | 0 | 0 | 7 |
| 44 | 0 | 1 | 0 | 0 | 0 |
| 45 | 4 | 0 | 2 | 0 | 0 |
| 46 | 1 | 0 | 0 | 0 | 3 |

## APPENDIX C: CAMERA SUMMARY OF WILDLIFE EVENTS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Caribou | Grizzly Bear | Wolverine | Muskox | Other Wildlife |
|---|---|---|---|---|---|
| 47 | 4 | 0 | 0 | 0 | 0 |
| 48 | 2 | 0 | 0 | 0 | 6 |
| 49 | 7 | 2 | 0 | 0 | 1 |
| 50 | 11 | 1 | 0 | 0 | 0 |
| 51 | 13 | 0 | 0 | 0 | 3 |
| 52 | 0 | 2 | 0 | 0 | 3 |
| 53 | 1 | 0 | 0 | 0 | 4 |
| 54 | 8 | 2 | 0 | 4 | 1 |
| 55 | 7 | 0 | 0 | 0 | 2 |
| 56 | 3 | 0 | 0 | 0 | 0 |
| 57 | 2 | 1 | 0 | 0 | 0 |
| 58 | 2 | 0 | 0 | 0 | 0 |
| 59 | 0 | 3 | 0 | 0 | 0 |
| 60 | 5 | 0 | 0 | 0 | 2 |

# APPENDIX D WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 5 | Control | 9/11/2023 | Caribou | 1 | 0 | Inspecting camera | Tundra | - |
| 5 | Control | 9/12/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 5 | Control | 9/26/2023 | Caribou | 1 | 0 | Inspecting camera | Tripod | - |
| 5 | Control | 10/5/2023 | Unknown | 0 | 0 | Inspecting camera | Tripod | This could be an animal. But it is difficult to tell which. It is only partially in frame and up close. |
| 7 | Control | 4/26/2024 | Caribou | 1 | 0 | Inspecting camera | Tundra | - |
| 7 | Control | 4/28/2024 | Arctic fox | 1 | 0 | Inspecting camera | Tripod | - |
| 8 | Control | 9/1/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 9 | Control | 9/7/2023 | Bird | 2 | 0 | Flying | Tundra | - |
| 9 | Control | 9/23/2023 | Unknown | 1 | 0 | Inspecting camera | Tripod | - |
| 11 | Treatment | 10/7/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 13 | Treatment | 9/15/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 14 | ZOI | 9/8/2023 | Unknown | 1 | 0 | Inspecting camera | Tripod | - |
| 14 | ZOI | 10/10/2023 | Small mammal | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 5/12/2024 | Arctic fox | 1 | 0 | Inspecting camera | Tripod | - |
| 14 | ZOI | 5/17/2024 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 14 | ZOI | 5/20/2024 | Bird | 0 | 0 | Resting | Tripod | - |
| 14 | ZOI | 5/22/2024 | Grizzly bear | 1 | 0 | Walking | Tundra | - |
| 14 | ZOI | 5/23/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 5/24/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 5/25/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 5/26/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 5/26/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 5/27/2024 | Small mammal | 1 | 0 | Running | Tundra | - |
| 14 | ZOI | 6/1/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 6/2/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 6/3/2024 | Bird | 1 | 0 | Resting | Tundra | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 14 | ZOI | 6/4/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 14 | ZOI | 6/5/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 14 | ZOI | 6/7/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 15 | Treatment | 5/30/2024 | Bird | 1 | 0 | Flying | Tundra | - |
| 15 | Treatment | 6/9/2024 | Unknown | 1 | 0 | Inspecting camera | Tripod | - |
| 16 | Control | 9/4/2023 | Caribou | 0 | 1 | Walking | Tundra | - |
| 16 | Control | 9/18/2023 | Caribou | 3 | 0 | Feeding | Tundra | - |
| 16 | Control | 10/3/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 16 | Control | 4/5/2024 | Arctic fox | 1 | 0 | Walking | Tundra | - |
| 16 | Control | 4/10/2024 | Arctic fox | 1 | 0 | Walking | Tundra | - |
| 16 | Control | 5/6/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 16 | Control | 6/7/2024 | Bird | 1 | 0 | Flying | Tundra | - |
| 21 | Treatment | 5/6/2024 | Arctic hare | 1 | 0 | Resting | Tripod | - |
| 22 | Treatment | 9/3/2023 | Grizzly bear | 3 | 0 | Inspecting camera | Tundra | - |
| 22 | Treatment | 9/16/2023 | Small mammal | 1 | 0 | Inspecting camera | Tripod | - |
| 22 | Treatment | 9/17/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 9/22/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 9/22/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 9/22/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 9/23/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 9/26/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 10/12/2023 | Small mammal | 1 | 0 | Walking | Tripod | - |
| 22 | Treatment | 5/23/2024 | Small mammal | 1 | 0 | Inspecting camera | Tripod | - |
| 23 | ZOI | 10/17/2023 | Small mammal | 1 | 0 | Walking | Tundra | - |
| 26 | ZOI | 9/9/2023 | Grizzly bear | 2 | 0 | Inspecting camera | Tundra | - |
| 26 | ZOI | 10/18/2023 | Small mammal | 1 | 0 | Inspecting camera | Tripod | - |
| 28 | Treatment | 9/7/2023 | Caribou | 1 | 0 | Feeding | Tundra | - |
| 28 | Treatment | 9/13/2023 | Caribou | 1 | 0 | Inspecting camera | Tundra | - |
| 28 | Treatment | 10/17/2023 | Caribou | 1 | 0 | Inspecting camera | Tripod | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 32 | Treatment | 9/25/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 34 | ZOI | 9/13/2023 | Bird | 32 | 0 | Feeding | Tundra | Geese |
| 34 | ZOI | 9/16/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 34 | ZOI | 10/14/2023 | Caribou | 1 | 0 | Inspecting camera | Tripod | - |
| 36 | Control | 9/2/2023 | Caribou | 2 | 0 | Inspecting camera | Tundra | - |
| 40 | Control | 10/5/2023 | Caribou | 2 | 0 | Feeding | Tundra | - |
| 40 | Control | 4/13/2024 | Caribou | 1 | 0 | Feeding | Tundra | - |
| 40 | Control | 5/13/2024 | Caribou | 2 | 0 | Inspecting camera | Tundra | - |
| 41 | ZOI | 9/1/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 41 | ZOI | 9/13/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 41 | ZOI | 9/27/2023 | Grizzly bear | 2 | 0 | Inspecting camera | Tripod | - |
| 41 | ZOI | 10/6/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 41 | ZOI | 6/1/2024 | Bird | 1 | 0 | Flying | Unknown | - |
| 41 | ZOI | 6/4/2024 | Caribou | 1 | 0 | Inspecting camera | Unknown | - |
| 42 | Treatment | 9/5/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 45 | Control | 10/1/2023 | Wolverine | 1 | 0 | Inspecting camera | Tripod | - |
| 45 | Control | 10/1/2023 | Wolverine | 1 | 0 | Inspecting camera | Tripod | - |
| 46 | ZOI | 9/7/2023 | Caribou | 3 | 0 | Inspecting camera | Tripod | - |
| 49 | Control | 10/12/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 50 | Treatment | 9/12/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 50 | Treatment | 9/23/2023 | Grizzly bear | 1 | 0 | Walking | Tundra | - |
| 50 | Treatment | 6/4/2024 | Caribou | 7 | 0 | Resting | Tundra | - |
| 50 | Treatment | 6/7/2024 | Caribou | 2 | 0 | Feeding | Tundra | - |
| 51 | Treatment | 11/15/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 51 | Treatment | 5/1/2024 | Arctic fox | 1 | 0 | Walking | Tundra | - |
| 51 | Treatment | 5/11/2024 | Arctic fox | 1 | 0 | Walking | Tundra | - |
| 51 | Treatment | 5/28/2024 | Bird | 2 | 0 | Walking | Esker | - |
| 53 | Treatment | 10/1/2023 | Grizzly bear | 1 | 0 | Walking | Tundra | - |
| 54 | Treatment | 10/18/2023 | Muskox | 2 | 0 | Inspecting camera | Tundra | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 54 | Treatment | 10/18/2023 | Muskox | 2 | 0 | Inspecting camera | Tundra | - |
| 54 | Treatment | 11/29/2023 | Muskox | 1 | 0 | Inspecting camera | Tripod | - |
| 54 | Treatment | 12/13/2023 | Muskox | 1 | 0 | Inspecting camera | Tripod | - |
| 55 | ZOI | 9/24/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 56 | Control | 9/5/2023 | Caribou | 2 | 0 | Walking | Lake | - |
| 56 | Control | 5/31/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 56 | Control | 6/2/2024 | Bird | 1 | 0 | Resting | Tundra | - |
| 57 | ZOI | 9/3/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 57 | ZOI | 9/4/2023 | Caribou | 1 | 0 | Inspecting camera | Tundra | - |
| 58 | Control | 9/6/2023 | Caribou | 1 | 0 | Walking | Tundra | - |
| 58 | Control | 9/10/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 60 | Treatment | 9/3/2023 | Grizzly bear | 2 | 0 | Inspecting camera | Tundra | - |
| 60 | Treatment | 9/28/2023 | Grizzly bear | 1 | 0 | Inspecting camera | Tripod | - |
| 1 | Treatment | 6/13/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/13/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/13/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/14/2024 | Bird | 2 | 0 | - | - | - |
| 1 | Treatment | 6/14/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/14/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/14/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/15/2024 | Bird | 2 | 0 | - | - | - |
| 1 | Treatment | 6/19/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/19/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/21/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/21/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/21/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/21/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 6/21/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 7/8/2024 | Arctic hare | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Treatment | 7/8/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 7/8/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 7/8/2024 | Arctic hare | 1 | 0 | - | - | - |
| 1 | Treatment | 7/9/2024 | Caribou | 6 | 0 | - | - | - |
| 1 | Treatment | 7/13/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/14/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/15/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/15/2024 | Caribou | 2 | 0 | - | - | - |
| 1 | Treatment | 7/15/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/20/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/22/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 1 | Treatment | 7/25/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/27/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/27/2024 | Caribou | 1 | 0 | - | - | - |
| 1 | Treatment | 7/27/2024 | Caribou | 2 | 0 | - | - | - |
| 1 | Treatment | 7/27/2024 | Caribou | 1 | 0 | - | - | - |
| 2 | Treatment | 7/9/2024 | Caribou | 1 | 0 | - | - | - |
| 2 | Treatment | 7/21/2024 | Caribou | 1 | 0 | - | - | - |
| 2 | Treatment | 7/27/2024 | Caribou | 1 | 0 | - | - | - |
| 4 | Control | 9/13/2023 | Bird | 3 | 0 | - | - | Geese |
| 10 | ZOI | 6/16/2024 | Caribou | 1 | 0 | - | - | - |
| 10 | ZOI | 6/17/2024 | Caribou | 1 | 0 | - | - | - |
| 10 | ZOI | 6/25/2024 | Caribou | 1 | 0 | - | - | - |
| 10 | ZOI | 6/30/2024 | Caribou | 1 | 0 | - | - | - |
| 10 | ZOI | 7/3/2024 | Caribou | 1 | 0 | - | - | - |
| 10 | ZOI | 7/4/2024 | Caribou | 2 | 0 | - | - | - |
| 10 | ZOI | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 10 | ZOI | 7/21/2024 | Small mammal | 1 | 0 | - | - | - |
| 10 | ZOI | 7/21/2024 | Caribou | 2 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 10 | ZOI | 7/31/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 10 | ZOI | 8/1/2024 | Caribou | 2 | 0 | - | - | - |
| 10 | ZOI | 8/1/2024 | Caribou | 1 | 0 | - | - | - |
| 11 | Treatment | 6/18/2024 | Caribou | 3 | 0 | - | - | - |
| 11 | Treatment | 6/18/2024 | Caribou | 3 | 0 | - | - | - |
| 11 | Treatment | 7/2/2024 | Caribou | 1 | 0 | - | - | - |
| 11 | Treatment | 7/2/2024 | Caribou | 1 | 0 | - | - | - |
| 11 | Treatment | 7/3/2024 | Caribou | 2 | 0 | - | - | - |
| 11 | Treatment | 7/6/2024 | Caribou | 1 | 0 | - | - | - |
| 11 | Treatment | 7/6/2024 | Caribou | 1 | 0 | - | - | - |
| 11 | Treatment | 7/7/2024 | Caribou | 3 | 0 | - | - | - |
| 11 | Treatment | 7/7/2024 | Caribou | 4 | 0 | - | - | - |
| 11 | Treatment | 7/7/2024 | Caribou | 3 | 0 | - | - | - |
| 12 | ZOI | 9/16/2023 | Arctic hare | 1 | 0 | - | - | - |
| 13 | Treatment | 7/2/2024 | Caribou | 1 | 0 | - | - | - |
| 14 | ZOI | 6/12/2024 | Bird | 1 | 0 | - | - | - |
| 14 | ZOI | 6/25/2024 | Caribou | 2 | 1 | - | - | - |
| 14 | ZOI | 6/25/2024 | Caribou | 8 | 0 | - | - | - |
| 14 | ZOI | 6/29/2024 | Caribou | 1 | 0 | - | - | - |
| 15 | Treatment | 6/20/2024 | Caribou | 3 | 0 | - | - | - |
| 15 | Treatment | 6/20/2024 | Caribou | 1 | 0 | - | - | - |
| 15 | Treatment | 6/20/2024 | Caribou | 3 | 0 | - | - | - |
| 15 | Treatment | 7/4/2024 | Bird | 1 | 0 | - | - | - |
| 15 | Treatment | 7/6/2024 | Caribou | 1 | 0 | - | - | - |
| 15 | Treatment | 7/9/2024 | Caribou | 3 | 0 | - | - | - |
| 15 | Treatment | 7/9/2024 | Caribou | 1 | 0 | - | - | - |
| 15 | Treatment | 7/15/2024 | Unknown | 1 | 0 | - | - | - |
| 15 | Treatment | 7/18/2024 | Unknown | 1 | 0 | - | - | - |
| 15 | Treatment | 7/23/2024 | Unknown | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 15 | Treatment | 7/29/2024 | Bird | 1 | 0 | - | - | - |
| 17 | Treatment | 6/29/2024 | Bird | 1 | 0 | - | - | - |
| 17 | Treatment | 7/13/2024 | Bird | 2 | 0 | - | - | - |
| 17 | Treatment | 7/16/2024 | Unknown | 1 | 0 | - | - | - |
| 17 | Treatment | 7/21/2024 | Unknown | 1 | 0 | - | - | - |
| 17 | Treatment | 7/27/2024 | Unknown | 1 | 0 | - | - | - |
| 18 | Treatment | 7/7/2024 | Caribou | 2 | 0 | - | - | - |
| 18 | Treatment | 7/13/2024 | Caribou | 2 | 0 | - | - | - |
| 18 | Treatment | 7/13/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/17/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/17/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/20/2024 | Caribou | 2 | 0 | - | - | - |
| 18 | Treatment | 7/23/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/23/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/23/2024 | Caribou | 2 | 0 | - | - | - |
| 18 | Treatment | 7/23/2024 | Caribou | 3 | 0 | - | - | - |
| 18 | Treatment | 7/24/2024 | Caribou | 2 | 0 | - | - | - |
| 18 | Treatment | 7/24/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/25/2024 | Caribou | 3 | 0 | - | - | - |
| 18 | Treatment | 7/26/2024 | Caribou | 1 | 0 | - | - | - |
| 18 | Treatment | 7/27/2024 | Caribou | 4 | 0 | - | - | - |
| 19 | Treatment | 7/6/2024 | Caribou | 3 | 0 | - | - | - |
| 19 | Treatment | 7/11/2024 | Caribou | 1 | 0 | - | - | - |
| 19 | Treatment | 7/22/2024 | Caribou | 1 | 0 | - | - | - |
| 19 | Treatment | 7/25/2024 | Caribou | 1 | 0 | - | - | - |
| 19 | Treatment | 7/25/2024 | Caribou | 1 | 0 | - | - | - |
| 19 | Treatment | 7/25/2024 | Caribou | 1 | 0 | - | - | - |
| 19 | Treatment | 7/27/2024 | Caribou | 2 | 0 | - | - | - |
| 20 | Culvert | 6/12/2024 | Caribou | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 20 | Culvert | 6/26/2024 | Caribou | 1 | 0 | - | - | - |
| 20 | Culvert | 6/26/2024 | Unknown | 1 | 0 | - | - | - |
| 20 | Culvert | 6/27/2024 | Unknown | 1 | 0 | - | - | - |
| 20 | Culvert | 6/27/2024 | Unknown | 1 | 0 | - | - | - |
| 22 | Treatment | 6/10/2024 | Caribou | 2 | 0 | - | - | - |
| 22 | Treatment | 6/13/2024 | Caribou | 2 | 0 | - | - | - |
| 22 | Treatment | 6/13/2024 | Caribou | 3 | 0 | - | - | - |
| 22 | Treatment | 6/21/2024 | Caribou | 2 | 0 | - | - | - |
| 22 | Treatment | 6/21/2024 | Caribou | 3 | 0 | - | - | - |
| 22 | Treatment | 6/22/2024 | Caribou | 2 | 0 | - | - | - |
| 22 | Treatment | 6/22/2024 | Caribou | 3 | 0 | - | - | - |
| 22 | Treatment | 6/28/2024 | Caribou | 1 | 0 | - | - | - |
| 22 | Treatment | 6/30/2024 | Caribou | 2 | 0 | - | - | - |
| 22 | Treatment | 6/30/2024 | Caribou | 3 | 0 | - | - | - |
| 23 | ZOI | 6/14/2024 | Caribou | 1 | 0 | - | - | - |
| 23 | ZOI | 6/23/2024 | Caribou | 1 | 0 | - | - | - |
| 23 | ZOI | 6/23/2024 | Caribou | 1 | 0 | - | - | - |
| 23 | ZOI | 6/24/2024 | Arctic fox | 0 | 0 | - | - | - |
| 23 | ZOI | 7/7/2024 | Arctic fox | 1 | 0 | - | - | - |
| 23 | ZOI | 7/9/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 23 | ZOI | 7/9/2024 | Grizzly bear | 3 | 0 | - | - | - |
| 24 | ZOI | 4/20/2024 | Arctic fox | 1 | 0 | - | - | - |
| 24 | ZOI | 6/9/2024 | Bird | 2 | 0 | - | - | Geese |
| 24 | ZOI | 6/9/2024 | Bird | 2 | 0 | - | - | Geese |
| 24 | ZOI | 6/10/2024 | Bird | 2 | 0 | - | - | Geese |
| 24 | ZOI | 6/12/2024 | Bird | 1 | 0 | - | - | Goose |
| 24 | ZOI | 6/14/2024 | Bird | 1 | 0 | - | - | Goose |
| 24 | ZOI | 6/15/2024 | Bird | 1 | 0 | - | - | Goose |
| 24 | ZOI | 6/17/2024 | Bird | 1 | 0 | - | - | Goose |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 24 | ZOI | 6/20/2024 | Bird | 1 | 0 | - | - | Goose |
| 25 | ZOI | 6/17/2024 | Caribou | 1 | 0 | - | - | - |
| 25 | ZOI | 6/20/2024 | Caribou | 3 | 0 | - | - | - |
| 25 | ZOI | 6/20/2024 | Caribou | 4 | 0 | - | - | - |
| 25 | ZOI | 6/22/2024 | Caribou | 3 | 0 | - | - | - |
| 25 | ZOI | 6/22/2024 | Caribou | 1 | 0 | - | - | - |
| 25 | ZOI | 6/22/2024 | Caribou | 1 | 0 | - | - | - |
| 25 | ZOI | 6/22/2024 | Caribou | 2 | 0 | - | - | - |
| 25 | ZOI | 6/23/2024 | Moose | 1 | 0 | - | - | - |
| 25 | ZOI | 7/30/2024 | Caribou | 1 | 0 | - | - | - |
| 26 | ZOI | 7/1/2024 | Caribou | 1 | 0 | - | - | - |
| 26 | ZOI | 7/1/2024 | Caribou | 1 | 1 | - | - | - |
| 26 | ZOI | 7/3/2024 | Caribou | 1 | 0 | - | - | - |
| 26 | ZOI | 7/3/2024 | Caribou | 2 | 0 | - | - | - |
| 26 | ZOI | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 26 | ZOI | 7/4/2024 | Caribou | 2 | 0 | - | - | - |
| 26 | ZOI | 7/11/2024 | Unknown | 1 | 0 | - | - | - |
| 26 | ZOI | 7/20/2024 | Caribou | 2 | 0 | - | - | - |
| 26 | ZOI | 7/26/2024 | Caribou | 1 | 0 | - | - | - |
| 27 | Culvert | 6/27/2024 | Bird | 1 | 0 | - | - | - |
| 27 | Culvert | 6/30/2024 | Bird | 1 | 0 | - | - | - |
| 27 | Culvert | 7/17/2024 | Caribou | 1 | 0 | - | - | - |
| 27 | Culvert | 7/17/2024 | Caribou | 2 | 1 | - | - | - |
| 27 | Culvert | 7/18/2024 | Caribou | 1 | 0 | - | - | - |
| 28 | Treatment | 6/16/2024 | Caribou | 1 | 0 | - | - | - |
| 28 | Treatment | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 28 | Treatment | 7/12/2024 | Caribou | 1 | 0 | - | - | - |
| 28 | Treatment | 7/14/2024 | Bird | 1 | 0 | - | - | - |
| 28 | Treatment | 7/17/2024 | Bird | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 28 | Treatment | 7/24/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 28 | Treatment | 7/24/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 28 | Treatment | 7/24/2024 | Bird | 1 | 0 | - | - | - |
| 28 | Treatment | 7/24/2024 | Bird | 1 | 0 | - | - | - |
| 28 | Treatment | 7/25/2024 | Small mammal | 1 | 0 | - | - | - |
| 28 | Treatment | 7/25/2024 | Small mammal | 1 | 0 | - | - | - |
| 29 | Control | 9/22/2023 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/2/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/2/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/5/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/6/2024 | Arctic fox | 1 | 0 | - | - | - |
| 30 | ZOI | 7/8/2024 | Bird | 1 | 0 | - | - | - |
| 30 | ZOI | 7/9/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/23/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/25/2024 | Caribou | 1 | 0 | - | - | - |
| 30 | ZOI | 7/30/2024 | Caribou | 1 | 0 | - | - | - |
| 31 | Control | 7/29/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 32 | Treatment | 6/25/2024 | Caribou | 2 | 0 | - | - | - |
| 32 | Treatment | 6/25/2024 | Caribou | 2 | 0 | - | - | - |
| 32 | Treatment | 6/26/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 6/28/2024 | Caribou | 1 | 1 | - | - | - |
| 32 | Treatment | 7/2/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/2/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/3/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/7/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/8/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/8/2024 | Caribou | 2 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 32 | Treatment | 7/9/2024 | Bird | 9 | 0 | - | - | - |
| 32 | Treatment | 7/9/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/9/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/10/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/10/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/12/2024 | Bird | 1 | 0 | - | - | Goose |
| 32 | Treatment | 7/13/2024 | Bird | 1 | 0 | - | - | - |
| 32 | Treatment | 7/14/2024 | Bird | 3 | 0 | - | - | Goose |
| 32 | Treatment | 7/14/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/17/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/18/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/19/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/19/2024 | Caribou | 1 | 0 | - | - | - |
| 32 | Treatment | 7/19/2024 | Caribou | 2 | 0 | - | - | - |
| 32 | Treatment | 7/20/2024 | Caribou | 1 | 0 | - | - | - |
| 33 | Control | 9/8/2023 | Caribou | 1 | 0 | - | - | - |
| 33 | Control | 10/8/2023 | Caribou | 1 | 0 | - | - | - |
| 34 | ZOI | 6/18/2024 | Arctic fox | 1 | 0 | - | - | - |
| 34 | ZOI | 6/30/2024 | Caribou | 1 | 0 | - | - | - |
| 34 | ZOI | 7/15/2024 | Caribou | 1 | 0 | - | - | - |
| 34 | ZOI | 7/19/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 35 | Treatment | 6/21/2024 | Bird | 1 | 0 | - | - | - |
| 35 | Treatment | 6/21/2024 | Bird | 1 | 0 | - | - | - |
| 35 | Treatment | 6/21/2024 | Bird | 1 | 0 | - | - | - |
| 35 | Treatment | 7/12/2024 | Bird | 2 | 0 | - | - | - |
| 37 | Control | 6/12/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 37 | Control | 6/23/2024 | Muskox | 1 | 0 | - | - | - |
| 37 | Control | 6/23/2024 | Muskox | 1 | 0 | - | - | - |
| 39 | ZOI | 6/20/2024 | Caribou | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 39 | ZOI | 6/26/2024 | Caribou | 1 | 0 | - | - | - |
| 39 | ZOI | 7/22/2024 | Caribou | 1 | 0 | - | - | - |
| 39 | ZOI | 7/22/2024 | Caribou | 1 | 0 | - | - | - |
| 3 | Control | 6/30/2024 | Caribou | 1 | 0 | Feeding | Tundra | - |
| 3 | Control | 6/30/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 3 | Control | 7/8/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 3 | Control | 7/13/2024 | Caribou | 2 | 0 | Walking | Tundra | - |
| 3 | Control | 7/13/2024 | Caribou | 1 | 0 | Feeding | Tundra | - |
| 3 | Control | 7/14/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 3 | Control | 7/14/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 3 | Control | 7/20/2024 | Caribou | 2 | 0 | Walking | Tundra | - |
| 3 | Control | 7/26/2024 | Caribou | 1 | 0 | Walking | - | - |
| 40 | Control | 6/11/2024 | Caribou | 2 | 0 | Walking | Tundra | - |
| 40 | Control | 6/24/2024 | Muskox | 2 | 0 | Feeding | Tundra | - |
| 40 | Control | 6/25/2024 | Muskox | 3 | 0 | Feeding | Tundra | - |
| 40 | Control | 6/25/2024 | Muskox | 1 | 0 | Walking | Tundra | - |
| 43 | Control | 6/8/2024 | Human | 1 | 0 | - | - | - |
| 43 | Control | 7/1/2024 | Bird | 1 | 0 | - | - | Male LALO |
| 43 | Control | 7/4/2024 | Bird | 1 | 0 | - | - | SAVS |
| 43 | Control | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 43 | Control | 7/8/2024 | Bird | 2 | 0 | - | - | HOLA |
| 43 | Control | 7/12/2024 | Bird | 1 | 0 | - | - | LALO |
| 43 | Control | 7/18/2024 | Small mammal | 1 | 0 | - | - | - |
| 43 | Control | 7/21/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 43 | Control | 7/23/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 43 | Control | 8/1/2024 | Bird | 1 | 0 | - | - | UNBI |
| 45 | Control | 6/30/2024 | Caribou | 1 | 0 | - | - | - |
| 45 | Control | 7/9/2024 | Caribou | 1 | 0 | - | - | - |
| 45 | Control | 7/12/2024 | Caribou | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 45 | Control | 7/13/2024 | Caribou | 1 | 0 | - | - | - |
| 45 | Control | 7/23/2024 | Grizzly bear | 1 | 0 | - | - | - |
| 46 | ZOI | 9/2/2023 | Human | 1 | 0 | - | - | - |
| 46 | ZOI | 6/18/2024 | Unknown | 0 | 0 | - | - | - |
| 46 | ZOI | 7/17/2024 | Bird | 1 | 0 | - | - | UNBI |
| 47 | ZOI | 6/13/2024 | Caribou | 3 | 0 | - | - | - |
| 47 | ZOI | 7/4/2024 | Caribou | 1 | 1 | - | - | - |
| 47 | ZOI | 7/10/2024 | Caribou | 1 | 0 | - | - | - |
| 47 | ZOI | 7/17/2024 | Caribou | 1 | 0 | - | - | - |
| 48 | ZOI | 9/1/2023 | Human | 1 | 0 | - | - | - |
| 48 | ZOI | 6/26/2024 | Bird | 1 | 0 | - | - | Large UNBI |
| 48 | ZOI | 6/29/2024 | Unknown | 0 | 0 | - | - | - |
| 48 | ZOI | 6/29/2024 | Bird | 1 | 0 | - | - | UNBI |
| 48 | ZOI | 7/6/2024 | Caribou | 1 | 0 | - | - | - |
| 48 | ZOI | 7/7/2024 | Unknown | 0 | 0 | - | - | - |
| 48 | ZOI | 7/13/2024 | Caribou | 1 | 0 | - | - | - |
| 48 | ZOI | 7/24/2024 | Bird | 1 | 0 | - | - | UNJA |
| 49 | Control | 6/8/2024 | Human | 1 | 0 | - | - | - |
| 49 | Control | 7/4/2024 | Caribou | 2 | 0 | - | - | - |
| 49 | Control | 7/8/2024 | Caribou | 1 | 0 | - | - | - |
| 49 | Control | 7/14/2024 | Caribou | 2 | 0 | - | - | - |
| 49 | Control | 7/21/2024 | Caribou | 1 | 0 | - | - | - |
| 49 | Control | 7/25/2024 | Caribou | 1 | 0 | - | - | - |
| 49 | Control | 7/27/2024 | Caribou | 1 | 0 | - | - | - |
| 50 | Treatment | 6/16/2024 | Caribou | 1 | 0 | - | - | - |
| 50 | Treatment | 6/22/2024 | Caribou | 1 | 0 | - | - | - |
| 50 | Treatment | 6/23/2024 | Caribou | 3 | 0 | - | - | - |
| 50 | Treatment | 6/25/2024 | Caribou | 2 | 0 | - | - | - |
| 50 | Treatment | 6/27/2024 | Caribou | 1 | 0 | - | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 50 | Treatment | 7/4/2024 | Caribou | 2 | 0 | - | - | - |
| 50 | Treatment | 7/4/2024 | Caribou | 1 | 0 | - | - | - |
| 50 | Treatment | 7/4/2024 | Caribou | 3 | 0 | - | - | - |
| 50 | Treatment | 7/4/2024 | Caribou | 2 | 0 | - | - | - |
| 51 | Treatment | 6/25/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/5/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/5/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/15/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/18/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/18/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/20/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/23/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/23/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/24/2024 | Caribou | 2 | 0 | - | - | - |
| 51 | Treatment | 7/26/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/26/2024 | Caribou | 1 | 0 | - | - | - |
| 51 | Treatment | 7/27/2024 | Caribou | 1 | 0 | - | - | - |
| 52 | Treatment | 6/7/2024 | Human | 1 | 0 | - | - | - |
| 52 | Treatment | 6/29/2024 | Bird | 13 | 0 | - | - | Unknown waterbird |
| 52 | Treatment | 6/29/2024 | Bird | 14 | 0 | - | - | Unknown waterbird |
| 53 | Treatment | 6/10/2024 | Bird | 1 | 0 | - | - | WIPT |
| 53 | Treatment | 6/19/2024 | Bird | 1 | 0 | - | - | Unknown songbird |
| 53 | Treatment | 6/22/2024 | Grizzly bear | 1 | 0 | Walking | - | - |
| 53 | Treatment | 6/26/2024 | Bird | 1 | 0 | Flying | - | UNBI |
| 53 | Treatment | 7/1/2024 | Bird | 1 | 0 | Flying | - | UNBI |
| 53 | Treatment | 7/2/2024 | Caribou | 1 | 1 | Walking | - | - |
| 54 | Treatment | 6/10/2024 | Caribou | 3 | 0 | Running | - | - |
| 54 | Treatment | 6/10/2024 | Caribou | 1 | 0 | Walking | - | - |
| 54 | Treatment | 6/16/2024 | Caribou | 1 | 0 | Feeding | - | - |

## APPENDIX D: WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2023 TO SEPTEMBER 2024

| Camera No. | Camera Type | Date | Species | No. of Adults | No. of Juvenile | Behaviour | Location of Wildlife | Comment |
|---|---|---|---|---|---|---|---|---|
| 54 | Treatment | 6/16/2024 | Caribou | 1 | 0 | Feeding | - | - |
| 54 | Treatment | 6/17/2024 | Caribou | 2 | 0 | Feeding | - | - |
| 54 | Treatment | 6/26/2024 | Caribou | 3 | 0 | Feeding | - | - |
| 54 | Treatment | 6/30/2024 | Caribou | 1 | 0 | Walking | - | - |
| 54 | Treatment | 7/4/2024 | Caribou | 1 | 0 | Feeding | - | - |
| 55 | ZOI | 6/15/2024 | Caribou | 2 | 0 | Resting | Tundra | - |
| 55 | ZOI | 6/18/2024 | Caribou | 2 | 0 | Feeding | Tundra | - |
| 55 | ZOI | 6/23/2024 | Caribou | 2 | 0 | Feeding | Tundra | - |
| 55 | ZOI | 6/23/2024 | Bird | 1 | 0 | Inspecting camera | Tripod | Unknown |
| 55 | ZOI | 7/5/2024 | Grizzly bear | 1 | 0 | Inspecting camera | Tundra | - |
| 55 | ZOI | 7/5/2024 | Caribou | 2 | 0 | Walking | Tundra | - |
| 55 | ZOI | 7/8/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 55 | ZOI | 7/9/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 55 | ZOI | 7/31/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 56 | Control | 6/20/2024 | Caribou | 1 | 1 | Walking | Tundra | - |
| 56 | Control | 7/10/2024 | Caribou | 1 | 0 | Inspecting camera | Tundra | - |
| 58 | Control | 7/4/2024 | Caribou | 1 | 0 | Resting | Tundra | - |
| 60 | Treatment | 6/17/2024 | Caribou | 1 | 0 | Running | Tundra | - |
| 60 | Treatment | 6/18/2024 | Arctic fox | 1 | 0 | Walking | Tundra | Red fox |
| 60 | Treatment | 7/3/2024 | Grizzly bear | 1 | 2 | Running | Tundra | - |
| 60 | Treatment | 7/5/2024 | Bird | 2 | 0 | Flying | Tripod | Unknown |
| 60 | Treatment | 7/6/2024 | Caribou | 1 | 0 | Inspecting camera | Tundra | - |
| 60 | Treatment | 7/8/2024 | Caribou | 1 | 0 | Running | Tundra | - |
| 60 | Treatment | 7/20/2024 | Caribou | 1 | 0 | Walking | Tundra | - |
| 60 | Treatment | 7/26/2024 | Caribou | 2 | 0 | Walking | Tundra | - |

# APPENDIX E WILDLIFE INTERACTIONS, INCIDENTS, AND MORTALITIES RECORDED AT THE MINE, 2024

# APPENDIX E: WILDLIFE INTERACTIONS, INCIDENTS, AND MORTALITIES RECORDED AT THE MINE, 2024

| Incident Date | Incident Type | Species | Event Description | Immediate Response Actions | Corrective/Preventative Actions Generated | External Regulatory Bodies Notified |
|---|---|---|---|---|---|---|
| July 21, 2024 | Wildlife interaction | Caribou | Two caribou were identified within the quarry "D" blast area (one in the quarry) on the evening of July 20, 2024, during a pre-blast survey. The blast was scheduled for 17:00 and was postponed until 19:00, as the caribou were in the control zone. At 19:00, the blast was canceled until July 21, 2024. On July 21, 2024, the caribou was still in the quarry. Due to safety concerns for the animal and people, it was decided to deter the caribou out of the area so that it would safe to blast. As per the WMMP, a human line was used to safely guide the caribou out of the pit. From there, a drone and Kubota were used to guide the caribou out of the blasting area. | Deterred; successful | N/A | N/A |
| October 11, 2024 | Wildlife interaction | Grizzly | Two bears made their way to the Hope Bay camp/core shack. As they approached, a bear banger and drone were used to deter the bears away from the site. The bears remained in the area and were monitored by Kailey and Brett before they started to move towards the camp a second time. As it was getting dark, and the drone could not fly in the dark, three additional bear bangers were user to deter the bears again. They moved out of sight, but remained in the area. | Deterred; successful | N/A | N/A |
| August 2, 2024 | Wildlife mortality | Sik sik (Arctic ground squirrel) | Observers came upon the animal, already dead, on the Windy Road. The animal was run over by an unidentified vehicle. | No action required | Yes; Environmental staff will remind all workers onsite that wildlife has the right of way, and all vehicles are to drive slowly. | N/A |
| June 4, 2024 | Wildlife interaction | Grizzly | A bear near drill 4 required action to deter the animal from the drill. The bear was moving toward the drill and required a helicopter to redirect the bear to a safe location for the animal and workers. | Deterred; successful | N/A | NA |
| July 5, 2024 | Wildlife interaction | Grizzly | Observation at the Vent. Raise from about 08h30 to 14h. Mainly observing the bear grazing, sleeping, and playing. Toward the end of the observation, the drone was flown. The bear got startled and moved away; impact on the bear was less than 30 seconds and the bear moved away less than 20 metres. More of a nudge than deterrence. | Monitored the area | N/A | N/A |
| June 7, 2024 | Wildlife interaction | Grizzly | Workers in tundra at Robert's Bay changing wildlife camera card was unable to return to their truck when a bear was making its way towards them. Mike Thompson was in a rock truck so was able to prevent the bear from crossing the road. The bear remained on the west side and the worker on the east about 500 m away. The bear stayed there until a helicopter was able to safely push the bear to the west and the worker was moved to safety. | Deterred; successful | Yes; Stopped the task and will complete with the use of helicopters going forward. | N/A |
| August 8, 2024 | Wildlife mortality | Sik sik (Arctic ground squirrel) | Dead sik sik observed on Windy Road at KM5.7. It appeared to have been run over by a vehicle. | No action required | Yes; Environmental staff will remind all workers onsite that wildlife has the right of way, and all vehicles are to drive slowly. | N/A |

# APPENDIX F HOPE BAY WILDLIFE SIGHTINGS LOG, 2024

# APPENDIX F: HOPE BAY WILDLIFE SIGHTINGS LOG, 2024

| Date | Species Name | Total # | # A | # M | # F | # Y | # U | Activity | General Location |
|---|---|---|---|---|---|---|---|---|---|
| January 9, 2024 | Red fox | 2 | 2 | | | | | Playing on road | Windy |
| January 11, 2024 | Fox | 1 | | | | | 1 | Fox tracks observed | Roberts Bay |
| January 11, 2024 | Muskox | 21 | | | | | 21 | Resting/Feeding | Windy |
| January 11, 2024 | Ptarmigan | 7 | | | | | 7 | Flying | Roberts Bay |
| January 11, 2024 | Raven | 1 | | | | | 1 | Flying | Roberts Bay |
| January 13, 2024 | Red fox | 1 | 1 | | | | | Running | Doris |
| January 17, 2024 | Arctic hare | 1 | 1 | | | | | Running | Doris |
| January 17, 2024 | Red fox | 1 | 1 | | | | | Running/Foraging | Doris |
| January 17, 2024 | Red fox | 2 | | | | | 2 | Running | Windy |
| January 19, 2024 | Red fox | 1 | | | | | 1 | Running | Windy |
| January 25, 2024 | Red fox | 1 | | | | | 1 | Running | Doris |
| January 29, 2024 | Muskox | 5 | | | | | 5 | Resting/Feeding | Windy |
| January 29, 2024 | Red fox | 1 | | | | | 1 | Running | Windy |
| January 29, 2024 | Wolverine | 1 | | | | | 1 | Running | Windy |
| February 1, 2024 | Caribou | 7 | | | | | 7 | Walking | Windy |
| February 2, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 3, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 3, 2024 | Ptarmigan | 8 | 8 | | | | | Resting | Doris |
| February 6, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 7, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 8, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 9, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 9, 2024 | Ptarmigan | 7 | | | | | 7 | Flying | Windy |
| February 10, 2024 | Muskox | 25 | | | | | 25 | Resting/Feeding | Windy |
| February 11, 2024 | Arctic hare | 1 | 1 | | | | 1 | Resting | Doris |
| February 13, 2024 | Red fox | 1 | 1 | | | | 1 | Running | Doris |
| February 15, 2024 | Muskox | 25 | | | | | 25 | Resting | Windy |
| February 16, 2024 | Fox | 1 | | | | | 1 | Walking | Doris |
| February 16, 2024 | Fox | 1 | | | | | 1 | Walking | Doris |
| February 16, 2024 | Red fox | 1 | 1 | | | | 1 | Walking | Windy |
| February 22, 2024 | Ptarmigan | 2 | 2 | | | | | Walking | Doris |

| Date | Species Name | Total # | # A | # M | # F | # Y | # U | Activity | General Location |
|---|---|---|---|---|---|---|---|---|---|
| February 22, 2024 | Ptarmigan | 17 | 17 | | | | | Walking | Doris |
| February 22, 2024 | Ptarmigan | 11 | | | | | 1 | Resting/Flying | Doris |
| February 22, 2024 | Red fox | 1 | | | | | 1 | Walking | Doris |
| February 28, 2024 | Ptarmigan | 9 | 9 | | | | | Resting | Doris |
| February 29, 2024 | Arctic hare | 1 | 1 | | | | | Running | Doris |
| February 29, 2024 | Ptarmigan | 3 | 3 | | | | | Flying | TIA |
| March 1, 2024 | Ptarmigan | 11 | | | | | 1 | Roosting | Doris |
| March 2, 2024 | Caribou | Unknown | | | | | | Feeding/Bedding evidence | Windy |
| March 6, 2024 | Muskox | 21 | | | | | 21 | Walking | Windy |
| March 7, 2024 | Muskox | 3 | | | | | 3 | Walking | Windy |
| March 7, 2024 | Red fox | 1 | 1 | | | | | Running | Windy |
| March 7, 2024 | Wolverine | 1 | | | | | 1 | Running | Doris |
| March 8, 2024 | Muskox | 20 | | | | | 20 | Walking | Windy |
| March 8, 2024 | Ptarmigan | 2 | 2 | | | | | Resting/Feeding | Doris |
| March 10, 2024 | Fox | 1 | | | | | 1 | Walking | Doris |
| March 10, 2024 | Fox | 1 | | | | | 1 | Walking | Doris |
| March 12, 2024 | Arctic hare | 1 | | | | | 1 | Running | Doris |
| March 12, 2024 | Ptarmigan | 6 | | | | | 6 | Walking | Doris |
| March 13, 2024 | Red fox | 3 | | | | | 3 | Walking | Doris |
| March 14, 2024 | Arctic hare | 1 | 1 | | | | 1 | Sitting | Roberts Bay |
| March 17, 2024 | Arctic hare | 1 | 1 | | | | 1 | Running | Doris |
| March 18, 2024 | Ptarmigan | 4 | 4 | | | | 4 | Sitting | Doris |
| March 19, 2024 | Fox | 1 | | | | | 1 | Trotting | Doris |
| March 22, 2024 | Duck | 2 | 2 | | | | 2 | Flying | Doris |
| March 22, 2024 | Ptarmigan | 7 | | | | | 7 | Walking | Doris |
| March 23, 2024 | Arctic hare | 1 | 1 | | | | 1 | Sitting | Doris |
| March 23, 2024 | Ptarmigan | 10 | | | | | 10 | Sitting | Doris |
| March 23, 2024 | Red fox | 1 | 1 | | | | 1 | Walking | Doris |
| March 24, 2024 | Peregrine falcon | 1 | 1 | | | | 1 | Flying | Windy |
| March 24, 2024 | Red fox | 1 | 1 | | | | 1 | Walking | Doris |
| March 24, 2024 | Red fox | 1 | | | | | 1 | Walking | Doris |
| March 25, 2024 | Ptarmigan | 7 | | | | | 7 | Standing | Doris |
| March 25, 2024 | Red fox | 1 | 1 | | | | 1 | Walking | Doris |

| Date | Species Name | Total # | # A | # M | # F | # Y | # U | Activity | General Location |
|---|---|---|---|---|---|---|---|---|---|
| March 28, 2024 | Arctic hare | 1 | 1 | | | | 1 | Sitting | Doris |
| March 28, 2024 | Ptarmigan | 30 | | | | | 30 | Standing | Windy |
| March 30, 2024 | Arctic hare | 1 | 1 | | | | 1 | Sitting | Doris |
| April 2, 2024 | Arctic hare | 1 | 1 | | | | | Sitting | Doris |
| April 6, 2024 | Arctic hare | 1 | 1 | | | | | Sitting and bounding | Doris |
| April 6, 2024 | Ptarmigan | 6 | | | | | 6 | Roosting | Doris |
| April 7, 2024 | Eagle | 2 | | | | | 2 | Soaring | Doris |
| April 7, 2024 | Ptarmigan | ~50 | | | | | ~50 | Feeding, walking, and flying | Windy |
| April 11, 2024 | Golden eagle | 2 | | | | | 2 | Soaring | Doris |
| April 14, 2024 | Arctic hare | 1 | 1 | | | | | Sitting | Doris |
| April 15, 2024 | Arctic hare | 1 | 1 | | | | | Sitting | Doris |
| April 15, 2024 | Peregrine falcon | 1 | | | | | 1 | Flying | Windy |
| April 18, 2024 | Ptarmigan | 15 | | | | | 15 | Flying | Doris |
| April 18, 2024 | Ptarmigan | 12 | | | | | 12 | Flying | Windy |
| April 18, 2024 | Raven | 2 | | | | | 2 | Flying | Doris |
| April 18, 2024 | Raven | 2 | | | | | 2 | Perched | Windy |
| April 19, 2024 | Arctic hare | 1 | | | | | 1 | Resting | Doris |
| April 21, 2024 | Arctic hare | 2 | | | | | 2 | Resting | Doris |
| April 22, 2024 | Grizzly | 1 | | | | | 1 | Walking | Windy |
| April 24, 2024 | Arctic hare | 1 | 1 | | | | 1 | Sitting | Doris |
| April 24, 2024 | Ptarmigan | 5 | | | | | 5 | Walking | Windy |
| April 25, 2024 | Arctic hare | 1 | | | | | 1 | Hanging out | Doris |
| April 25, 2024 | Caribou | 2 | | | | | 2 | Walking | Windy |
| April 25, 2024 | Ptarmigan | 1 | | | | | 1 | Standing | Doris |
| April 27, 2024 | Arctic hare | 2 | | | | | 2 | Hanging out | Doris |
| April 27, 2024 | Fox | 1 | | | | | 1 | Walking | Windy |
| May 1, 2024 | Fox | 1 | | | | | 1 | Walking | Doris |
| May 2, 2024 | Fox | 1 | | | | | 1 | Walking | Doris |
| May 3, 2024 | Arctic hare | 2 | | | | | 2 | Standing | Doris |
| May 3, 2024 | Caribou | 5 | | | | | 5 | Walking | Windy |
| May 4, 2024 | Arctic hare | 1 | | | | | 1 | Sitting | TIA |
| May 4, 2024 | Arctic hare | 1 | | | | | 1 | Walking | Doris |
| May 4, 2024 | Caribou | 5 | | | | | 5 | Grazing | TIA |

| Date | Species Name | Total # | # A | # M | # F | # Y | # U | Activity | General Location |
|---|---|---|---|---|---|---|---|---|---|
| May 4, 2024 | Caribou | 3 | | | | | 3 | Grazing | TIA |
| May 4, 2024 | Rough-legged hawk | 2 | | | | | 2 | Flying | Windy |
| May 5, 2024 | Gyrfalcon | 1 | | | | | 1 | Flying | Doris |
| May 5, 2024 | Gyrfalcon | 2 | | | | | 2 | Flying | Doris |
| May 5, 2024 | Rough-legged hawk | 1 | | | | | 1 | Flying | TIA |
| May 6, 2024 | Canada goose | 4 | | | | | 4 | Flying | Doris |
| May 6, 2024 | Canada goose | 20 | | | | | 20 | Flying | Doris |
| May 6, 2024 | Fox | 1 | | | | | 1 | Walking | Windy |
| May 6, 2024 | Gyrfalcon | 4 | | | | | 4 | Flying/Diving | Doris |
| May 7, 2024 | Greater white-fronted goose | 2 | | | | | 2 | Flying | TIA |
| May 7, 2024 | Ptarmigan | 1 | | | | | 1 | Flying | Doris |
| May 7, 2024 | Seal | 1 | | | | | 1 | Resting | Roberts Bay |
| May 8, 2024 | Fox | 1 | | | | | 1 | Walking | Windy |
| May 9, 2024 | Arctic hare | 1 | | | | | 1 | Walking | Roberts Bay |
| May 9, 2024 | Arctic hare | 1 | | | | | 1 | Resting | Doris |
| May 9, 2024 | Seal | 2 | | | | | 2 | Resting | Roberts Bay |
| May 11, 2024 | Canada goose | 2 | | | | | 2 | Walking | Windy |
| May 11, 2024 | Greater white-fronted goose | 2 | | | | | 2 | Flying | Windy |
| May 11, 2024 | Rough-legged hawk | 1 | | | | | 1 | Flying | Windy |
| May 11, 2024 | Sandhill crane | 6 | | | | | 6 | Walking | Windy |
| May 12, 2024 | Greater white-fronted goose | 8 | | | | | 8 | Walking | TIA |
| May 12, 2024 | Hoary redpoll | 4 | | | | | 4 | Flying/Resting | TIA |
| May 12, 2024 | Rough-legged hawk | 2 | | | | | 2 | Flying | Windy |
| May 13, 2024 | Caribou | 8 | | | | | 8 | Walking/Grazing | TIA |
| May 14, 2024 | Grizzly bear | 2 | | | | | 2 | Walking | Windy |
| May 14, 2024 | Grizzly bear | 1 | | | | | 1 | Walking | Roberts Bay |
| May 14, 2024 | Grizzly bear | 2 | | | | | 2 | Walking | Windy |
| May 14, 2024 | Grizzly bear | 2 | | | 1 | 1 | | Eating/Walking | Windy |
| May 16, 2024 | Cross fox | 1 | | | | | 1 | Walking/Hunting | Doris |
| May 16, 2024 | Fox | 1 | | | | | 1 | Walking | TIA |
| May 16, 2024 | Sandhill crane | 2 | | | | | 2 | Walking/Foraging | Doris |
| May 17, 2024 | Goose / Mixed flocks | 100 | | | | | 100 | Landing/Flushing | Windy |
| May 17, 2024 | Sandhill crane | 10 | | | | | 10 | Flying/Walking | Windy |

| Date | Species Name | Total # | # A | # M | # F | # Y | # U | Activity | General Location |
|---|---|---|---|---|---|---|---|---|---|
| May 18, 2024 | American pipit | 1 | | | | | 1 | Resting | Windy |
| May 18, 2024 | Arctic hare | 1 | | | | | 1 | Walking | Windy |
| May 18, 2024 | Arctic hare | 1 | | | | | 1 | Eating | Doris |
| May 18, 2024 | Caribou | 1 | | | | | 1 | Walking | Windy |
| May 18, 2024 | Common redpoll | 2 | | | | | 2 | Flying | Windy |
| May 18, 2024 | Goose | 2 | | | | | 2 | Eating | Doris |
| May 18, 2024 | Rough-legged hawk | 4 | | | | | 4 | Flying | Windy |
| May 19, 2024 | Arctic hare | 1 | | | | | 1 | Walking | Doris |
| May 19, 2024 | Caribou | 1 | | | | | 1 | Walking | Windy |
| May 19, 2024 | Goose | 30 | | | | | 30 | Resting | TIA |
| May 19, 2024 | Gull sp. | 5 | | | | | 5 | Flying/Resting | TIA |
| May 19, 2024 | Red fox | 1 | | | | | 1 | Walking | Doris |
| May 19, 2024 | Rough-legged hawk | 1 | | | | | 1 | Hovering | TIA |
| May 19, 2024 | Sandhill crane | 4 | | | | | 4 | Standing | Windy |
| May 20, 2024 | Semipalmated plover | 1 | | | | | 1 | Walking/Flying | Windy |
| May 20, 2024 | Tundra swan | 4 | | | | | 4 | Flying | Windy |
| May 21, 2024 | Grizzly bear | 2 | | | | | 2 | Walking | Windy |
| May 21, 2024 | Say’s pheobe | 1 | | | | | 1 | Flying | Doris |
| May 23, 2024 | Arctic ground squirrel | 2 | | | | | 2 | Standing | TIA |
| May 23, 2024 | Arctic hare | 1 | | | | | 1 | Sitting | Doris |
| May 23, 2024 | Caribou | 6 | | | | | 6 | Eating/Walking | Windy |
| May 23, 2024 | Peregrine falcon | 1 | | | | | 1 | Flying/Perched | Windy |
| May 23, 2024 | Tundra swan | 2 | | | | | 2 | Flying | Roberts Bay |
| May 24, 2024 | American robin | 2 | | | | | 2 | Singing | Roberts Bay |
| May 24, 2024 | Arctic hare | 1 | | | | | 1 | Walking and eating | Windy |
| May 24, 2024 | Grizzly bear | 3 | 1 | | | 2 | | Walking | Windy |
| May 25, 2024 | Goose | 10 | | | | | 10 | Walking | Windy |
| May 26, 2024 | Arctic hare | 2 | | | | | 2 | Eating | Windy |
| May 26, 2024 | Grizzly bear | 2 | 1 | | | 1 | | Walking | Windy |
| May 27, 2024 | Arctic hare | 1 | | | | | 1 | Running | Doris |
| May 27, 2024 | Cackling goose | 1 | | | | | 1 | Flying | Windy |
| May 27, 2024 | Grizzly bear | 2 | | | | | 2 | Walking | Windy |
| May 27, 2024 | Least sandpiper | 2 | | | | 2 | | Feeding/Walking | Windy |