7. RAPTOR MITIGATION AND MONITORING

Arctic-breeding raptors nest either on steep faces of rock outcrops, or on the ground. Four species of cliff-nesting raptors may breed in the wildlife RSA: Peregrine Falcon (*Falco peregrinus tundrius*), Gyrfalcon (*Falco rusticolus*), Rough-legged Hawk (*Buteo lagopus*), and Golden Eagle (*Aquila chrysaetos*). Three ground-nesting raptor species may occur in the wildlife RSA: Snowy Owl (*Bubo scandiacus*), Short-eared Owl (*Asio flammeus*), and Northern Harrier (*Circus cyaneus*).

7.1 FEIS PREDICTIONS

The predicted residual effects of the Back River Mine on raptors as identified in the FEIS included:

- Habitat loss (not significant, low magnitude);
- Disturbance (not significant, low magnitude);
- Direct mortality and injury (not significant, low magnitude);
- Attraction (not significant, low magnitude); and
- Reduction in reproductive productivity (not significant, low magnitude).

Mitigation and management measures to reduce the potential for these effects to result in residual effects on raptors are discussed in Section 10 of the WMMP Plan.

7.2 PRE-CLEARING SURVEYS FOR GROUND-NESTING RAPTOR NESTS

Where possible, construction activities are scheduled to occur outside of the raptor breeding season of April 15 to August 15. If avoidance is not possible, then pre-clearing raptor nest surveys are conducted, as described in Section 10.3.1.2 of the WMMP Plan (B2Gold 2024a) and the Pre-Clearing Nest Surveys for Land Clearing Pre-construction, Construction SOP (B2Gold 2024l). Pre-clearing surveys are aimed at identifying active raptor ground nests that are at risk of disturbance from construction activities, and thereby trigger appropriate management as described in Section 10.2.2.2 of the WMMP Plan (B2Gold 2024a).

7.2.1 METHODS

Pre-clearing surveys are conducted prior to construction occurring during the raptor breeding season to ensure all nests in the area are located (e.g., in case of new nest construction) and occupancy status is confirmed. Straight line transects stratifying the proposed disturbance area were walked by two observers looking for birds and signs of nesting, as described in Section 6.2.

Where potential nests are noted, observers slowly and carefully search the immediate area for a nest, and a setback buffer is established around any active nests and potentially active nesting locations identified. Buffer size follows those described in Table 6.2-1, with the nesting location in the centre of the buffer. Follow up surveys are completed weekly, following methods described in Section 6.2.

Bird pre-clearing surveys were conducted in accordance with and using the data sheet provided in the Pre-Clearing Nest Surveys for Land Clearing Pre-construction, Construction SOP (B2Gold 2024l), and described in further detail in Section 6.2.1, including recommended buffer size and mitigative measures for all identified nests.

7.2.2 RESULTS AND DISCUSSION

Pre-clearing surveys for birds completed in 2024 are described in Section 6.2.2. No raptor nests were identified during pre-clearing surveys in 2024, and therefore no mitigation or buffers were required.

Pre-clearing surveys were effective at ensuring all nests in the area were located in areas where disturbance was planned during the bird breeding season. No raptor nests were observed, and no additional mitigation was required in 2024.

7.3 PIT AND QUARRY WALL NEST MONITORING

The pit and quarry wall nest monitoring program is designed to identify active raptor nests at risk of disturbance from blasting activities, and to implement mitigation to exclude raptors prior to nest building, as described in Section 10.3.1.1 of the WMMP Plan (B2Gold 2024a). Nest monitoring at pit and quarry sites will be conducted prior to and during the raptor nesting period if blasting is planned, to ensure that adults are excluded and cannot build nests.

In 2024, pit and quarry wall nest monitoring was completed during the raptor breeding season between April and August, and no raptors were observed.

7.3.1 METHODS

Monitoring of pit and quarry walls for raptors is scheduled to be completed weekly during the raptor breeding period between April 15 to August 15 as per the WMMP Plan (B2Gold 2024a). Pit wall monitoring is completed by two observers: one observer would scan the sky and surrounding area for raptors, while the other scanned the pit or quarry wall for presence of raptors or raptor nests. Surveys lasted for 20 to 30 minutes at pre-determined vantage points and, if needed, rotate around the pit to see the entirety of the site. Observers looked for behaviour or visual signs of potential nesting activity, including raptor presence, copulation, raptors carrying nesting material, raptors carrying food for nestlings, raptors displaying defensive or territorial behaviours, raptors perching on pit walls, and visually identifiable stick nests.

General survey information recorded included date, start and end time, pit or quarry name, location, temperature, wind, and cloud cover. Observations of raptors were also recorded, including potential species, behaviour, nesting cues, nest stages, nest contents, location in pit, deterrents used, and success of deterrents.

Pit and quarry wall nest monitoring surveys were conducted in accordance with and using the data sheet provided in the Pit and Quarry Wall Raptor Nest Monitoring SOP (B2Gold 2024m), including mitigation measures for all raptors.

7.3.2 RESULTS AND DISCUSSION

Pit and quarry wall nest monitoring was completed in 2024 at the Echo Pit, as this is the only pit that currently has walls tall enough to potentially support cliff nests. A total of 26 surveys were completed at the Echo Pit between April 21 and August 12, 2024. Surveys were completed once in April (21), seven times in May (6, 9, 16, 20, 23, 27, 30), six times in June (3, 6, 13, 17, 22, 27), nine times in July (1, 4, 8, 11, 15, 18, 22, 25, 30), and three times in August (5, 8, 12). There were no observations of raptors or evidence of nesting recorded in any of the surveys completed in 2024.

Pit and quarry wall raptor nest monitoring surveys were effective at monitoring at the Echo Pit as no nests, individuals, or additional mitigation was required in 2024.

7.4 REGIONAL SURVEYS FOR RAPTOR NESTS

Regional monitoring for raptors will evaluate whether raptors are disturbed by Mine activities, resulting in lower nesting success, as described in Section 10.3.2.2 of the WMMP Plan (B2Gold 2024a). Results indicating lower breeding success by raptors near the Mine site will trigger a review of site activities to identify if there are adaptive management activities that can reduce any potential disturbance to raptors.

As 2024 was the first year of the regional raptor monitoring program, all nest sites were assessed for aerial-based survey safety to determine whether nests would be included in the long-term monitoring program. Raptor nest occupancy (spring survey) and productivity (summer survey) monitoring were both completed in 2024.

7.4.1 METHODS

7.4.1.1 AERIAL SURVEYS

Regional raptor monitoring was completed via aerial nest surveys using standardized protocols (RIC 2001). The regional raptor monitoring area was divided into two zones: a 1.5 km Treatment zone and a 10 km Control zone from Mine infrastructure, as per the WMMP Plan (B2Gold 2024a). Regional raptor monitoring was completed at historic nest sites found during the baseline studies (Rescan 2013b) and within suitable habitat to determine new nest sites. It was anticipated that many historic nests were likely to be decayed or no longer in use due to baseline studies being completed 10 years prior.

At each nest site, the nest characteristics were recorded along with the species present, number of individuals, number of eggs or nestlings, and any associated breeding behaviours observed. Monitoring was completed in the spring to establish nest occupancy and in the summer to establish nest productivity. A nest site was only considered occupied if a breeding pair was present and the nest (i.e., ledge or stick nest) appeared to be in use, or if a single adult was present and sitting on a nest (i.e., potentially incubating eggs). Raptors were sometimes observed in the general area of a nest site, but did not qualify as occupying the nest site if it appeared to be a non-breeding individual or a pair using the area, but unassociated with the nest site (e.g., using the habitat, but not breeding in that specific area). Nests were considered productive, defined as evidence of successful/continued breeding, if eggs or live nestlings were observed or if a nest was empty with signs of use and, due to life history timing, it was assumed fledged. This was most applicable to Gyrfalcon or Common Raven that were observed incubating during the spring raptor surveys and the young would have left the nest (i.e., fledged by the time of the second survey). However, as the productivity survey only measures one point in time, this does not imply true nest success, as not all nests will have fledged at the time of the survey, and certain species breed later than others in Nunavut (e.g., Rough-legged Hawk).

Productivity was determined by dividing the number of productive nests by the number of occupied nests. As this is the first year of the regional raptor nest monitoring, no data analyses were completed to determine temporal trends in the distribution, occupancy, and productivity of raptors between the Treatment and Control zones. These analyses will be completed once several years of data have been collected. Additionally, a future analysis will also be completed to determine if a Zone of Influence (ZOI) is detectible between the Treatment and Control groups once more data has been collected.

7.4.1.2 POWER ANALYSIS

A power analysis was completed to recommend a sample size of nest sites that will enable the accurate detection of differences in raptor occupancy or productivity between the Treatment and Control zones. The power analysis was completed under the consideration that the number of nest sites in the 1.5 km area (Treatment zone) is limited and is unlikely to greatly change due to the limited nesting habitat available (i.e., 16 nest sites available in 2024). Power analyses were completed in R (Version 4.4.2; R Core Team 2024) using the “pwr” package (Champely 2022).

7.4.2 RESULTS AND DISCUSSION

7.4.2.1 SPRING OCCUPANCY SURVEY

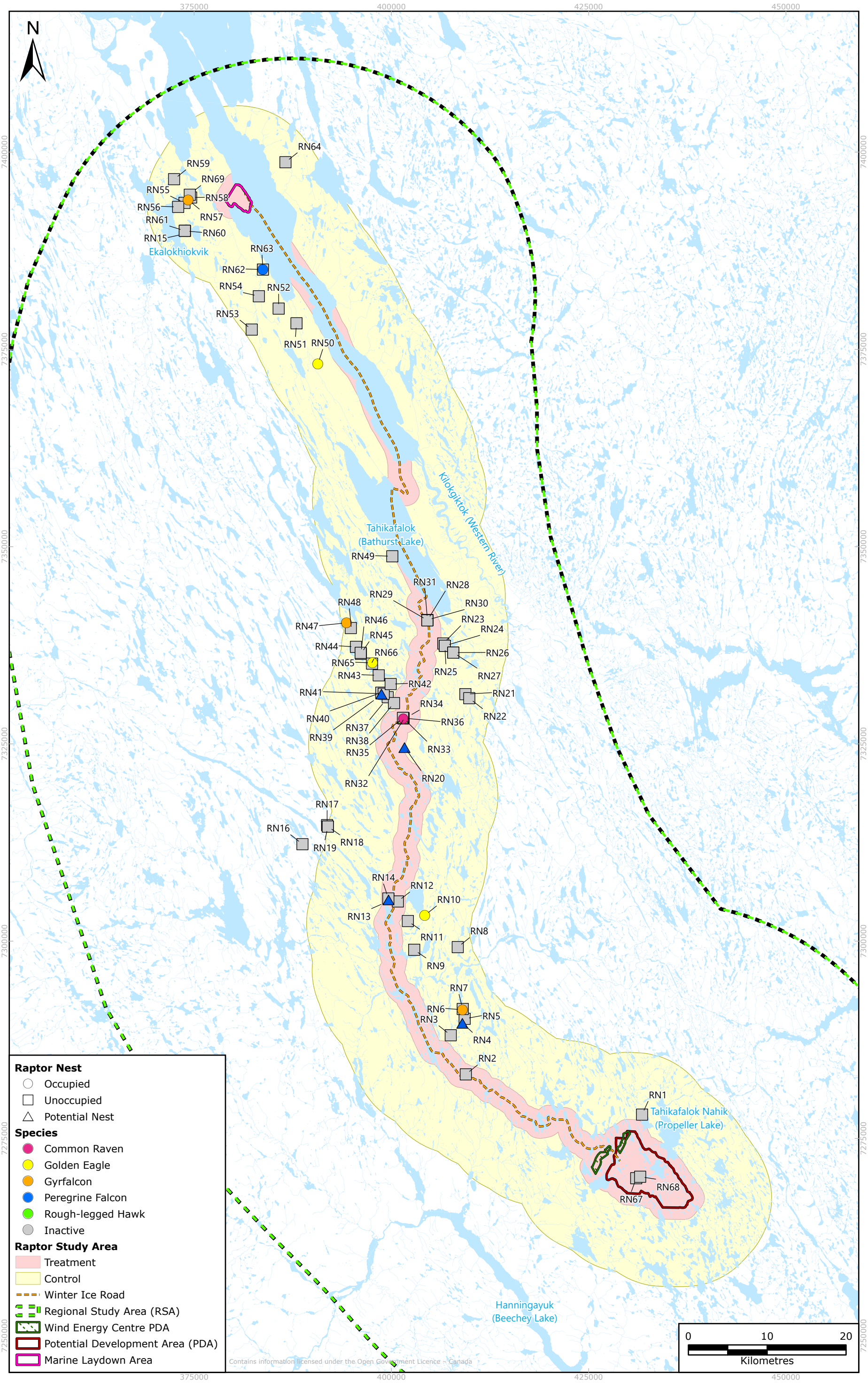
The spring occupancy survey was completed from May 16 to 17, 2024. A total of 68 potential raptor nest sites were surveyed: 50 historic nest sites and 18 newly recorded nest sites (Figure 7.4-1; Table 7.4-1; Appendix Q). Of the historic nest sites surveyed, 21 of them were not found due to snow cover or no signs of recent nesting present. No historic or new nest sites were observed within the MLA PDA, and only two historic nest sites (RN68 and RN67) occur in the Goose PDA, both of which were unoccupied. The Golden Eagle is the only raptor species of conservation concern recorded during the spring occupancy survey, territorially ranked as Vulnerable (CESCC 2022).

Raptors were observed actively occupying eight nest sites (six historic and two new sites): three Golden Eagles, three Gyrfalcon, one Peregrine Falcon (*Falco peregrinus*), and one Common Raven nest (Table 7.4-1; Figure 7.4-1; Photos 7.4-1 and 7.4-2; Appendix Q). All occupied sites were outside of the treatment zones, apart from a Common Raven nest (RN32), which was located within the Treatment zone near the WIR (Figure 7.4-1; Table 7.4-1; Appendix Q). An additional five nests were identified as “potentially active,” with adults being present in the area displaying nesting behaviours, but not actively occupying the nest at the time of the surveys, so could not be confirmed nests. These five potential nesting sites included four Peregrine Falcon and one Common Raven, all of which were historic nesting sites. Four of the potentially occupied sites were outside of the Treatment zone, and one potential Peregrine Falcon nest (RN 13) was located within the Treatment zone near the WIR (Appendix Q). Of the 50 historic nest sites surveyed in 2024 that were noted to be previously occupied by raptors during baseline surveys from 2007 to 2013, six nests (12%) were occupied by raptors and five nests (10%) were noted as being potentially occupied. During baseline surveys completed in 2013, 43% of nesting sites that had been occupied by raptors in previous survey years were occupied (Rescan 2013). A change in historic nest site occupancy is expected as the baseline was completed 10 years ago, and many historic nest sites surveyed in 2024 were unable to be found or noted to be fully decayed.

Photo 7.4–1 White Morph Gyrfalcon incubating eggs at nest site RN47 (within 10 km zone) observed during the spring raptor occupancy survey, 2024.

Photo 7.4-2 Golden Eagle incubating eggs at nest site RN65 (within 10 km zone) observed during the spring raptor occupancy survey, 2024.

FIGURE 7.4-1 REGIONAL RAPTOR SPRING OCCUPANCY SURVEY RESULTS WITH 1.5 KM AND 10 KM ZONES, MAY 2024



ERM

CLIENT: B2Gold
GIS NUMBER: BAC-23-651-01

DATE: 03/18/2025

PROJECTION: NAD 1983 UTM Zone 13N
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TABLE 7.4-1 SUMMARY OF OCCUPIED AND PRODUCTIVE NESTS IDENTIFIED DURING REGIONAL RAPTOR MONITORING, 2024

Site ID	Species Name[1]	Zone	Historic or New Nest	Spring Occupancy Survey		Summer Productivity Survey			
				Total Number of Adult Raptors	Adult Incubating?	Total Number of Adult Raptors	Number of Young	Number of Eggs	Productivity Status
RN10	Golden Eagle*	Control	Historic	1	Y	2	2	0	Productive
RN20	Peregrine Falcon	Control	Historic	2	N[2]	1	4	0	Productive
RN46	Peregrine Falcon	Control	Historic	1	N	2	1	0	Productive
RN47	Gyrfalcon	Control	Historic	2	Y	0	0	0	Empty, Assumed Fledged/Productive
RN50	Golden Eagle*	Control	Historic	1	Y	1	1	0	Productive
RN6	Gyrfalcon	Control	Historic	2	Y	0	0	0	Empty, Assumed Fledged/Productive
RN62	Peregrine Falcon	Control	Historic	2	Y	1	0	0	Empty, Assumed Fledged/Productive
RN65	Golden Eagle*	Control	Historic	2	Y	0	1	0	Productive
RN39	Peregrine Falcon	Control	New	2	N	0	2	0	Productive
RN57	Gyrfalcon	Control	New	1	Y	1	0	0	Empty apart from one failed egg, Assumed Fledged/Productive
RN69	Golden Eagle*	Control	NA	NA	NA	2	1	0	Productive
RN16	Peregrine Falcon	Control	Historic	0	N	1	4	0	Productive
RN32	Common Raven	Treatment	New	1	Y	0	0	0	Empty, Assumed Fledged/Productive
RN13	Peregrine Falcon	Treatment	Historic	1	N[2]	1	3	0	Productive
RN36	Rough-legged Hawk	Treatment	Historic	0	N	0	0	3	Productive
RN9	Peregrine Falcon	Control	Historic	2	N[2]	0	0	0	Unoccupied
RN28	Rough-legged Hawk	Treatment	Historic	0	N[2]	0	0	0	Unoccupied
RN30	Peregrine Falcon	Treatment	Historic	2	N[2]	0	0	0	Unoccupied

Notes:
* Indicates a species of conservation concern.
[1] The species name is provided for all nests either based on the species currently occupying the nest site, historic nest occupancy, or nest site characteristics.
[2] Occupancy was not confirmed, but adult presences suggest potential occupancy.

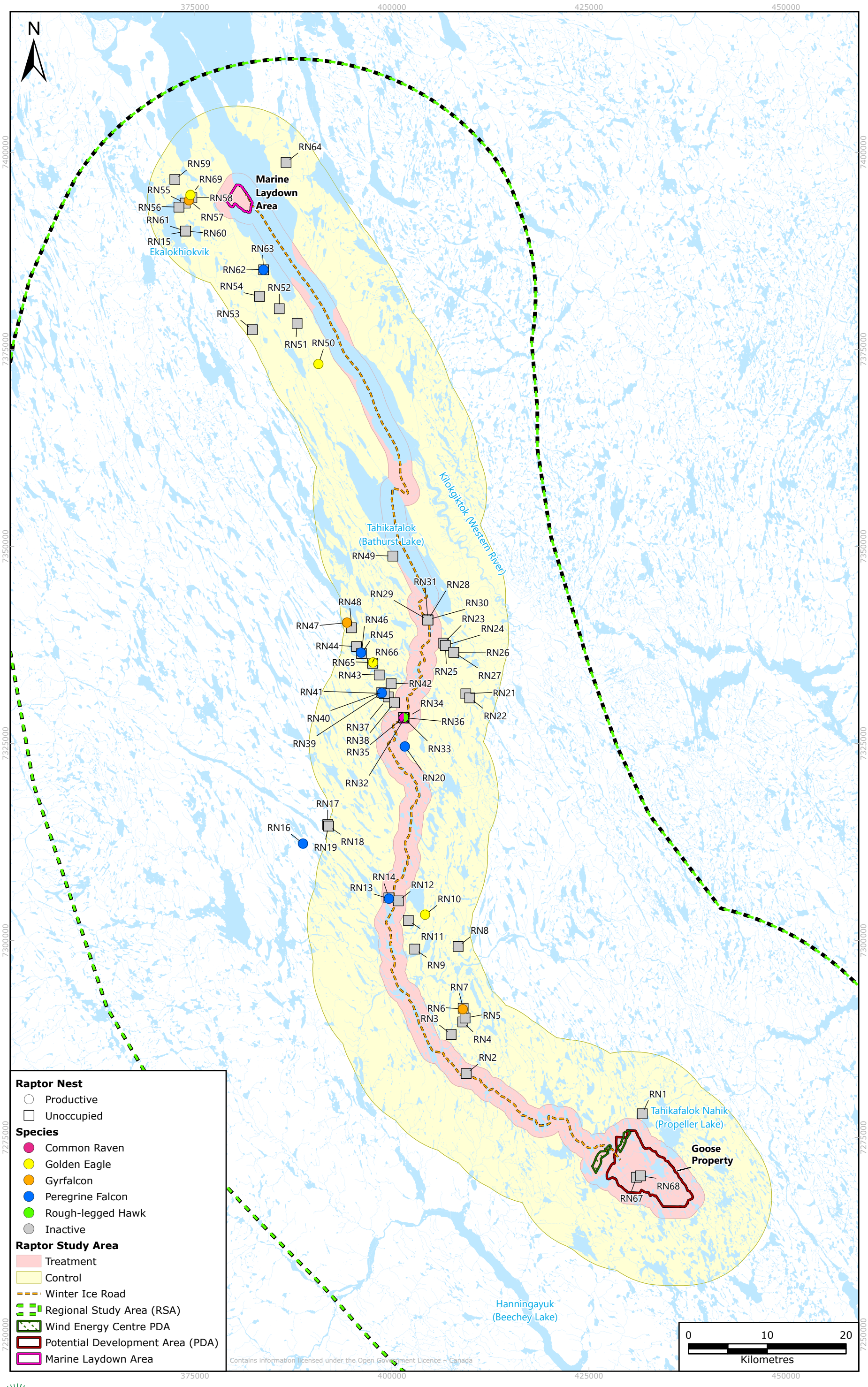
7.4.2.2 SUMMER PRODUCTIVITY SURVEY

The summer productivity survey was completed from July 19 to 22, 2024. A total of 69 sites were surveyed, including all 68 sites surveyed in the spring and one newly observed nest site (RN69) within the Control zone (Figure 7.4-2; Table 7.4-1; Photo 7.4-3 and Photo 7.4-4; Appendix Q). Of the 21 historic nests that were not found during the spring occupancy survey, 19 were not found during the summer productivity survey, but the other two were found and confirmed to be inactive.

Photo 7.4-3 Adult and nestling Golden Eagles at nest site RN69 (within 10 km zone) observed during the summer productivity survey, July 2024.

Photo 7.4-4 Adult and four nestling Peregrine Falcons at nest site RN20 (within 10 km zone) observed during the summer productivity survey, July 2024.

FIGURE 7.4-2 REGIONAL RAPTOR SUMMER PRODUCTIVITY SURVEY RESULTS WITH 1.5 KM AND 10 KM ZONES, JULY 2024



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CLIENT: B2Gold
GIS NUMBER: BAC-23-651-02

DATE: 03/18/2025

PROJECTION: NAD 1983 UTM Zone 13N
SCALE: 1:450,000 when printed at 11x17

In total, 15 productive nests were recorded, including four Golden Eagle nests, three Gyrfalcon nests, six Peregrine Falcon, one Common Raven, and one Rough-legged Hawk (Appendix Q). Ten of the 15 nests still had birds or eggs present, while the remaining five had signs of productivity, indicating young had fledged. All eight nests recorded as occupied (e.g., incubating adults) during the spring occupancy survey were also recorded as productive during the summer productivity survey (Table 7.4-1). Additionally, two of the potentially occupied nests recorded in the spring were productive in the summer. Of the remaining five nests that were productive in 2024, one (Golden Eagle) was a newly observed nest and four (three Peregrine Falcon and one Rough-legged Hawk) were surveyed in the spring, but did not have signs of being actively occupied or the nest could not be found in the spring. Productive nests that were not recorded during the spring survey are likely associated with later arriving migrants (e.g., Rough-legged Hawk), may not have yet begun conspicuous breeding activities, or adults were not present during the specific time when spring occupancy surveys were completed.

Three productive nests were located within the Treatment zone near the WIR, including Common Raven nest RN32, Rough-legged Hawk nest RN36, and Peregrine Falcon nest RN13 (Figure 7.4-2; Table 7.4-1; Appendix Q). No active nests were observed within the treatment zone around Goose or MLA. A Peregrine Falcon was recorded in the area of RN68, which is within the Goose PDA, but it did not appear to be a breeding individual. Overall, as occupied nests during the spring occupancy survey were determined productive in summer productivity surveys, results did not indicate a difference in productivity between the Treatment and the Control zones.

Compared to the 2013 baseline (Rescan 2013), reproductive outcomes were more successful in 2024. Raptor species during the 2013 baseline had 22 to 73% success in breeding for occupied nests, while 100% of nests were successful as observed during the productivity survey in 2024. However, these results are not directly comparable as the survey area for the baseline studies was much larger and contained more occupied nests than the contemporary monitoring area.

Over the 2024 regional raptor surveys, a total of 19 historic nest sites either did not have signs of recent nesting, didn't have suitable cliff nesting habitat, and/or the historic nest was not found (e.g., nest sites historically associated with ledges were no longer in use / no longer had whitewash to make them visible, stick nests were fully decayed). Of the 14 historic nest sites in the Treatment zone, six (43%) were not found / no longer used in recent years. Similarly, within the Control zone, 14 (39%) of the 36 historic nest sites were not found / no longer used.

As per the WMMP, all nest sites were assessed for safety of the field crew during aerial-based surveys. All nest sites were able to be safely accessed for the regional monitoring.

7.4.2.3 POWER ANALYSIS

Based on the power analysis conducted, it is recommended to use a sample size of at least 50 nests in the Control area to achieve a statistical power of 0.8 when detecting a moderate occupancy or productivity difference (0.3) between the Control and Treatment zones. For smaller differences, such as 0.1, the sample size in the Control area should be increased to around 100 nests to ensure adequate power for detecting subtle variations. Conversely, larger differences (0.5) can be detected with approximately 30 nests in the Control zone, while still achieving sufficient power. These sample size recommendations will enhance the reliability of the study in

elucidating trends in raptor populations across the zones. The power analysis was completed under the considerations that the nests located in the Treatment zone is limited to 16 nesting sites and is unlikely to change due to the nesting habitat that is available.

7.5 INCIDENTAL OBSERVATIONS OF RAPTORS

All personnel are responsible for recording wildlife sightings in the camp's wildlife logs (Appendix O). These logs provide an indication of the wildlife species that occur in proximity to and interact with the Back River Mine infrastructure, as described in Section 10.3.1.4 of the WMMP Plan (B2Gold 2024a). Section 3.9 summarizes the number of personnel on site collecting incidental sightings.

7.5.1 METHODS

All personnel at the Back River Mine are expected to report observations of wildlife occurring around or interacting with the Mine to the Environment Department. Incidental observation reports include location (GPS coordinates), date, time, species, number observed, behaviour, and any other descriptive information regarding the sighting.

Incidental observations were recorded in accordance with and using the data sheet provided in the Incidental Wildlife Observations SOP (B2Gold 2024k).

7.5.2 RESULTS AND DISCUSSION

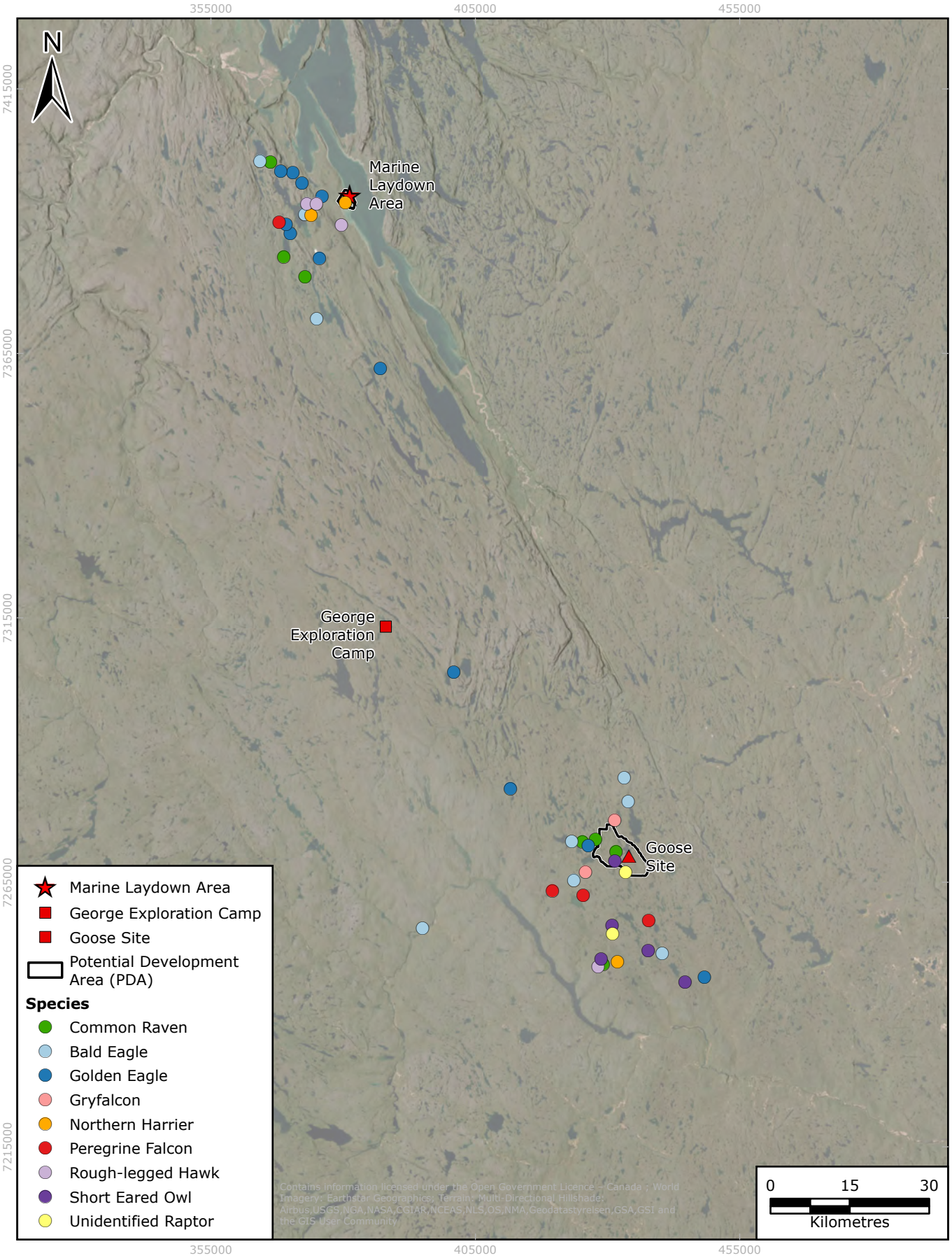
In 2024, there were 60 incidental observations of raptors, totaling an estimated 69 individuals (Figure 7.5-1; Appendix I). Overall, the most observed species was Golden Eagle (16 individuals observed), Bald Eagle (11 individuals observed), and Common Raven (11 individuals observed).

Six of the observations were made by onsite personnel. Four observations were made at Goose and included two observations of one unidentified raptor and two observations of two Peregrine Falcons (Figure 7.5-1). The remaining two observations were made at MLA, with one observation of a Peregrine Falcon and one observation of a Common Raven (Figure 7.5-1). Similarly, in 2023, there were five incidental observations of raptors by onsite personnel, which included three Rough-legged Hawks, one falcon, and one unspecified raptor species.

Incidental observations made by onsite biologists during wildlife regional monitoring programs accounted for the remaining 54 observations of an estimated total of 61 individuals (Table 7.5-1; Figure 7.5-1; Appendix I). The most commonly observed raptors were Golden Eagle (14 individuals observed), Bald Eagle (eight observations), and Common Raven (eight observations; Figure 7.5-1).

In previous years, incidental observations of raptors were limited to observations made by site staff. Various regional monitoring programs were completed in 2024 and accounted for 92% of raptor incidental observation events. These programs were completed across the RSA at varying distances from the sites. As a result, the increased number of raptors in 2024 is largely attributed to these programs and not a reflection of an increase in raptor presence around Goose and MLA.

FIGURE 7.5-1 INCIDENTAL OBSERVATIONS OF RAPTORS, 2024



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CLIENT: B2Gold
GIS NUMBER: BAC-23-655-04

DATE: 27 February 2025

PROJECTION: NAD 1983 UTM Zone 13N
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TABLE 7.5-1 INCIDENTAL OBSERVATIONS OF RAPTORS IN 2024

Species	Scientific Name	Observation Events	Estimated Number of Individuals
Bald Eagle	*Haliaeetus leucocephalus*	9	11
Common Raven	*Corvus corax*	9	11
Golden Eagle	*Aquila chrysaetos*	14	16
Gyrfalcon	*Falco rusticolus*	3	3
Northern Harrier	*Circus cyaneus*	3	3
Peregrine Falcon	*Falco peregrinus*	7	9
Rough-Legged Hawk	*Buteo lagopus*	6	6
Short Eared Owl	*Asio flammeus*	5	5
Unidentified Raptor	-	4	5
Total	**60**		**69**

8. MARINE MAMMAL MONITORING

Management and monitoring activities for marine mammals that occurred in 2024 included the following:

- Marine shipping monitoring and management for marine mammals and marine birds; and
- Incidental observations of marine mammals.

In 2024, B2Gold did not construct the on-ice airstrip at the MLA, and construction of the WIR on Bathurst Inlet was completed prior to February 15; therefore, no pre-construction surveys for seal lairs were required, but are also discussed below.

8.1 FEIS PREDICTIONS

Ringed seal was chosen as a representative species for the marine mammal community in the FEIS because TK and baseline surveys indicated that this species was the primary species to occupy habitats within the assessment area of the FEIS. With implementation of mitigative measures, no predicted residual effects on ringed seals were identified in the FEIS. Mitigation and management measures to reduce potential effects on ringed seals are discussed in Section 14 of the WMMP Plan.

8.2 MARINE SHIPPING MITIGATION AND MONITORING

NIRB Conditions #58 and #64 require B2Gold Nunavut to mitigate impacts and disturbance to marine mammals and marine birds during shipping.

The objectives of the marine mammal and seabird monitoring program during shipping include the following:

- Vessel crew record incidental observations of seabirds and marine mammals in the Northwest Passage;
- Document and report measures taken to mitigate impacts to marine mammals and large groups of seabirds, if required; and
- Document and report ship strikes of marine mammals or seabirds, if they occurred.

B2Gold Nunavut distributes a marine shipping SOP and Shipping Management Guidelines brochure to the shipping companies to review prior to transit to Bathurst Inlet to ensure captains and crew are aware of B2Gold Nunavut's Project Conditions (Appendix A).

8.2.1 METHODS

8.2.1.1 VESSEL TRACKS

B2Gold Nunavut provided a list of vessel names and dates of delivery for shipments to the Back River Mine's MLA. Each vessel is required by Transport Canada to transmit Automatic Identification System (AIS) data via a transceiver on board. These data are used by other vessels and Vessel Traffic Services to monitor vessel movements. ERM acquired archived AIS data from Vesseltracker, a commercial AIS supplier that aggregates AIS data from satellite and shore-based stations.

These data vary in frequency based on distance from shore, location of shore-based stations, and position of satellites. In some cases, AIS position data are available on an hourly or sub-hourly basis, but in other cases, position data can be 12 hours or more between fixes. Tracks for the vessel names and dates provided by B2Gold Nunavut were downloaded from Vesseltracker (Vesseltracker 2024) and plotted using ArcGIS Pro 3.3.2. Only vessels traveling to the Back River Mine's MLA are presented in this report.

8.2.1.2 MARINE MAMMAL AND SEABIRD OBSERVATIONS

Prior to the 2024 shipping season, B2Gold Nunavut provided an SOP to the shipping contractors, which describes the management and monitoring requirements for the mine (B2Gold 2024n).

During 2024, incidental marine mammal and seabird sightings were required to be recorded by crew members on the vessels. Data collected included the following:

- Date and time of sighting;
- Vessel information, such as name, speed, heading, and location;
- Environmental information, such as wind and visibility; and
- Sightings information, including the species, distance from vessel, number of individuals, behaviour, whether there was a ship strike, and any mitigation action.

8.2.2 RESULTS AND DISCUSSION

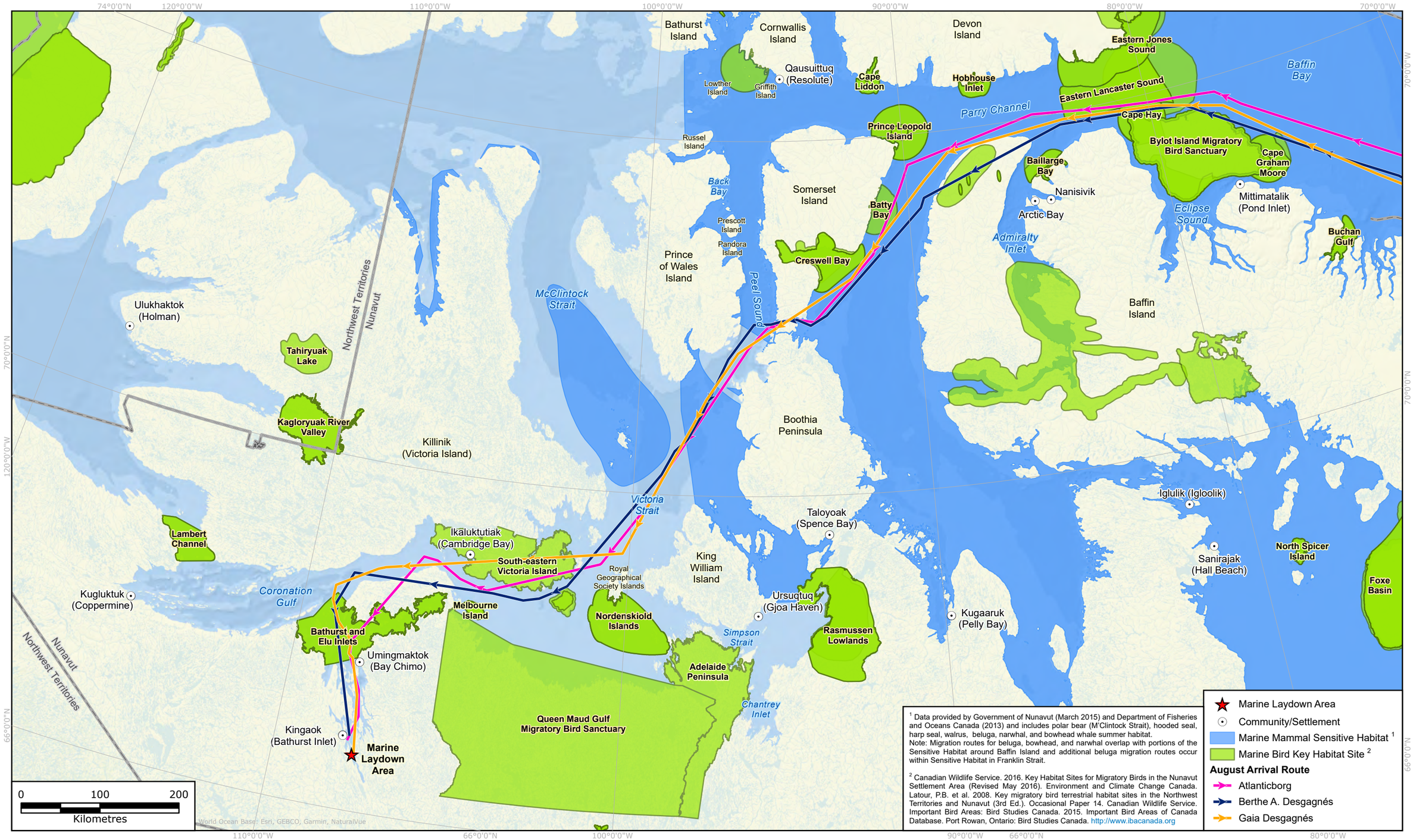
8.2.2.1 VESSEL ACTIVITY AND EFFORT

During 2024, there were 10 vessel sailings servicing the Back River Mine, summarized in Table 8.2-1, Figure 8.2-1, and Figure 8.2-2. There were two trips that traveled from the west to the MLA in September, and the remaining eight travelled from the east to the MLA. Vessel tracks broadcast using AIS vessel positioning were downloaded from Vesseltracker (2024) and plotted using ArcGIS Pro 3.2.2 (Figures 8.2-1 and 8.2-2).

TABLE 8.2-1 VESSELS TRAVELING TO THE MLA, AUGUST AND SEPTEMBER 2024

Vessel Name	Vessel Type	Shipping Route	Date Departed Original Port	Date Arrived in MLA	Date Departed MLA
MV Berthe Desgagnés	Cargo	Eastern Route	August 7	August 19	August 24
MV Atlanticborg	Cargo	Eastern Route	August 8	August 29	August 31
MT Gaia Desgagnés	Fuel	Eastern Route	August 12	August 26	August 26
MV Suomigracht	Cargo	Eastern Route	August 15	September 3	September 15
MV Sedna Desgagnés	Cargo	Eastern Route	August 21	September 2	September 7
MV Ukpik	Cargo	Eastern Route	August 30	September 13	September 18
MV Berthe Desgagnés	Cargo	Eastern Route	September 10	September 22	September 30
MV Marcellin Desgagnés	Cargo	Eastern Route	September 10	September 22	September 30
MT Torm Laura	Fuel	Western Route	July 30	September 4	September 5
MT Torm Lene	Fuel	Western Route	August 10	September 8	September 22

FIGURE 8.2-1 VESSEL TRACKS DURING SHIPPING SEASON, AUGUST 2024 ARRIVALS



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CLIENT: B2Gold
GIS NUMBER: BAC-23-641-01

DATE: 02/21/2025

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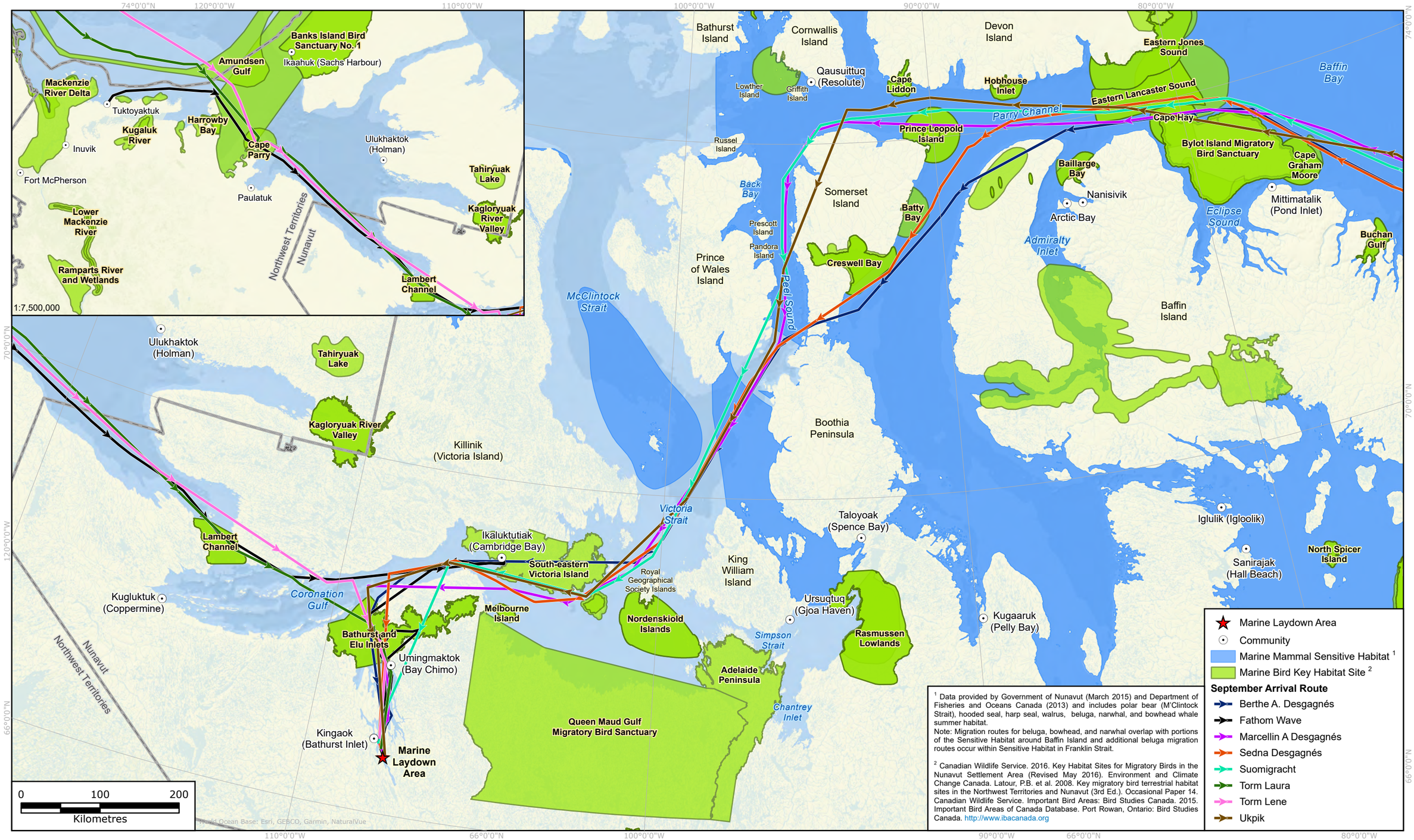
FIGURE 8.2-2 VESSEL TRACKS DURING SHIPPING SEASON, SEPTEMBER 2024 ARRIVALS



[1] Data provided by Government of Nunavut (March 2015) and Department of Fisheries and Oceans Canada (2013) and includes polar bear (M'Clintock Strait), hooded seal, harp seal, walrus, beluga, narwhal, and bowhead whale summer habitat.
Note: Migration routes for beluga, bowhead, and narwhal overlap with portions of the Sensitive Habitat around Baffin Island and additional beluga migration routes occur within Sensitive Habitat in Franklin Strait.

[2] Canadian Wildlife Service. 2016. Key Habitat Sites for Migratory Birds in the Nunavut Settlement Area (Revised May 2016). Environment and Climate Change Canada. Latour, P.B. et al. 2008. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut (3rd Ed.). Occasional Paper 14. Canadian Wildlife Service. Important Bird Areas: Bird Studies Canada. 2015. Important Bird Areas of Canada Database. Port Rowan, Ontario: Bird Studies Canada. http://www.ibacanada.org

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CLIENT: B2Gold
GIS NUMBER: BAC-23-641-02

DATE: 02/21/2025

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

During 2024, marine mammal and/or seabird sightings were recorded by crew members on nine of the vessels (all but the Torm Laura) between August 27 and October 18.

Vessel crew onboard ships servicing the Back River Mine are required to collect incidental sightings of marine mammals and seabirds during their voyage. However, some vessels conducted dedicated surveys while transiting, which is not a requirement for the Back River Mine. In addition to recording incidental sightings, 121 surveys (77 seabird surveys and 44 marine mammal surveys) were completed, totaling approximately 31 hours of observation time (approximately 14 hours dedicated to seabird surveys and 17 hours to marine mammal surveys) while travelling along the shipping route. Of the 77 seabird surveys, 69 were completed while the vessel was moving and the remaining eight while the vessel was anchored. Similarly, 34 of the 44 marine mammal surveys were completed while the vessel was moving, and the remaining 10 while the vessel was anchored. Marine mammals or seabirds were recorded during 61 of the 121 surveys. None of the sightings indicated requirements for management activity.

8.2.2.2 MARINE MAMMAL SIGHTINGS

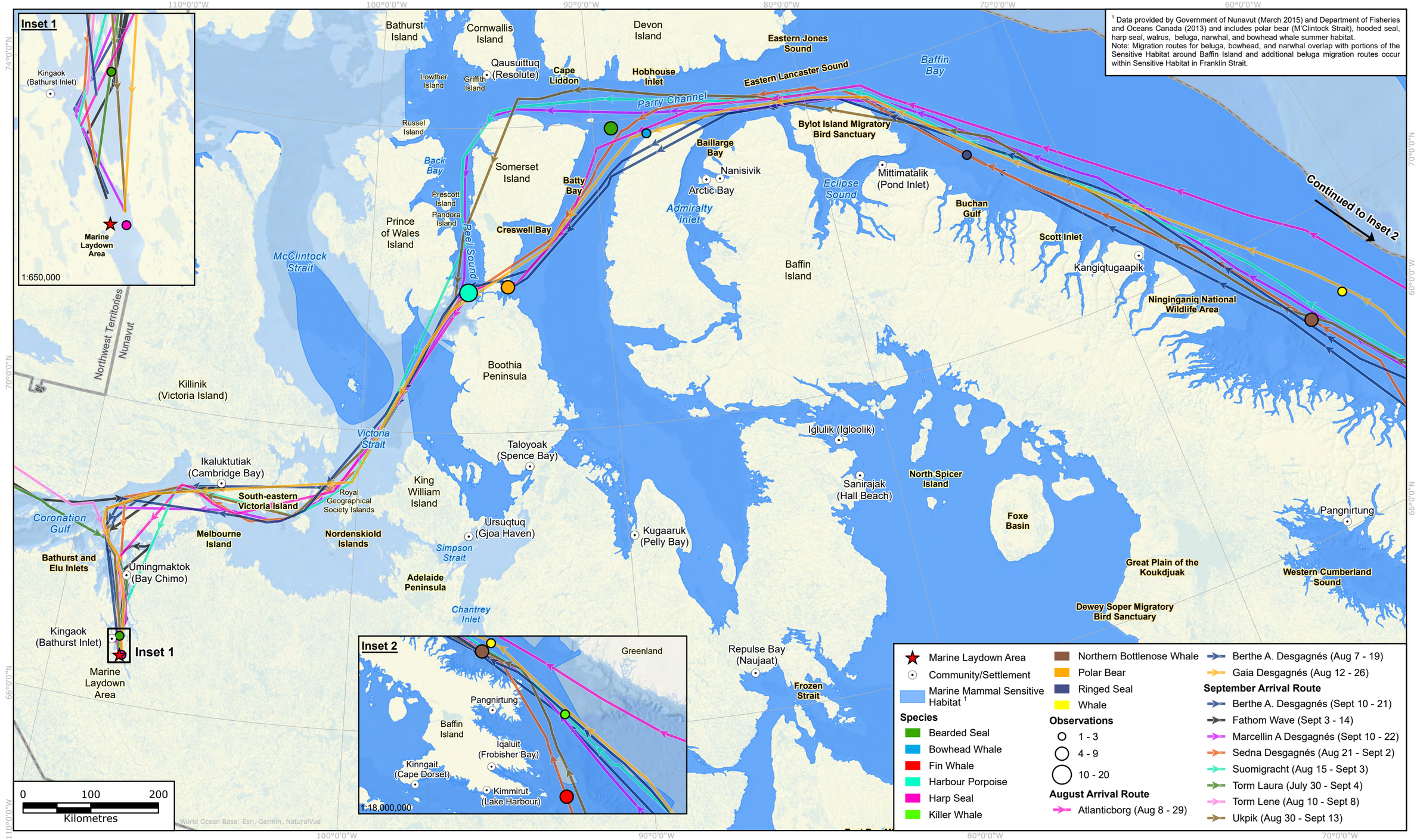
During 2024, 11 separate marine mammal sightings were recorded by crew members between August 15 and October 1. Ten marine mammal species were observed over 11 separate sightings: five sightings of five cetacean species, four sightings of three pinniped species, and one sighting of one ursid (Table 8.2-2; Figure 8.2-3; Appendix R).

TABLE 8.2-2 OBSERVATIONS OF MARINE MAMMALS DURING SHIPPING IN AUGUST THROUGH OCTOBER 2024

Marine Mammal Species Group	Common Name	Scientific Name	Sum of Count
Cetaceans	Bowhead whale[1]	*Balaena mysticetus*	1
	Fin whale[1, 2]	*Erignathus barbatus*	5
	Harbour porpoise	*Phocoena phocoena*	10
	Killer whale[1]	*Orcinus orca*	2
	Northern bottlenose whale[1]	*Hyperoodon ampullatus*	4
	Unknown whale	-	1
Pinnipeds	Bearded seal	*Balaenoptera physalus*	5
	Harp seal	*Pagophilus groenlandicus*	2
	Ringed seal[1]	*Pusa hispida*	2
Ursids	Polar bear[1, 2]	*Ursus maritimus*	4

Notes:
[1] COSEWIC status “Special Concern.”
[2] SARA Schedule 1 listing “Special Concern.”

FIGURE 8.2-3 MARINE MAMMAL OBSERVATIONS DURING SHIPPING, AUGUST AND SEPTEMBER 2024



ERM

CLIENT: B2Gold
GIS NUMBER: BAC-23-641-03

DATE: 02/28/2025

PROJECTION: Canada Lambert Conformal Conic
SCALE: 1:5,250,000 when printed at 11x17

Sightings of fin whale, killer whale, and northern bottlenose whale were observed in the Davis Strait, while bowhead whale was observed northeast of Baffin Island (Figure 8.2-3). An unidentified whale was also observed in the Davis Strait on October 1. All species of identified whales are ranked as Special Concern by COSEWIC: Atlantic Ocean populations of fin and killer whales, Baffin Bay populations of northern bottlenose whale, and Eastern Canada-West populations of bowhead whale (Government of Canada 2025). Atlantic Ocean populations of fin whale are also listed as Special Concern on SARA Schedule 1 (Government of Canada 2025). Polar bear is also listed as Special Concern on SARA Schedule 1 (Government of Canada 2025) and was observed on south Somerset Island.

Bearded seal was observed on two occasions, first on August 26 in the Parry Channel and again on September 9 in the Bathurst Inlet near the MLA (Figure 8.2-3). Other observations of seal included harp seal in the Bathurst Inlet near the MLA and ringed seal in Baffin Bay (Figure 8.2-3). Ringed seal is ranked as Special Concern by COSEWIC (Government of Canada 2025). No mitigative measures or ship strikes were recorded incidentally or through dedicated survey, and as such, no adaptive management measures were triggered by this program.

8.2.2.3 SEABIRD SIGHTINGS

During 2024, 118 separate bird sightings of 674 individual birds were recorded by crew members on six vessels (Gaia Desgagnes, Atlanticborg**,** Marcellin A. Desgagnes**,** Sedna Desgagnes, Berth A. Desgagnes, and Ukpik) between August 2 and October 16. A total of 25 bird species were observed that were identified to species (Table 8.2-3; Figure 8.2-4; Appendix R). Two sightings of unknown birds (five individuals over two sightings) and three sightings of unknown gulls (17 individuals over three sightings) were also observed.

TABLE 8.2-3 OBSERVATIONS OF SEABIRDS DURING SHIPPING, AUGUST TO OCTOBER 2024

Species	Scientific Name	Number of Sightings	Number Observed
Arctic Tern	*Sterna paradisaea*	5	18
Atlantic Puffin	*Fratercula arctica*	1	20
Black Guillemot	*Cepphus grylle*	3	15
Black-Legged Kittiwake	*Rissa tridactyla*	6	37
Brant	*Branta bernicla*	2	21
Canada Goose	*Branta canadensis*	3	115
Common Eider[1]	*Somateria mollissima*	2	22
Glaucous Gull	*Larus hyperboreus*	6	33
Greater Scaup	*Aythya marila*	1	20
Herring Gull	*Larus argentatus*	15	65
Iceland Gull	*Larus glaucoides*	11	46
Merlin	*Falco columbarius*	1	1
Northern Fulmar	*Fulmarus glacialis*	32	96

Species	Scientific Name	Number of Sightings	Number Observed
Parasitic Jaeger	*Stercorarius parasiticus*	1	2
Peregrine Falcon[1]	*Falco peregrinus*	1	1
Pomarine Jaeger	*Stercorarius pomarinus*	3	6
Razorbill	*Alca torda*	3	10
Red-Necked Phalarope	*Phalaropus lobatus*	1	1
Ross's Gull[2]	*Rhodostethia rosea*	1	2
Snow Goose	*Anser caerulescens*	4	76
Snowbunting or Arctic Redpoll	*Plectrophenax nivalis / Acanthis hornemanni*	1	1
Thick-Billed Murre	*Uria lomvia*	6	27
Tundra Swan	*Cygnus columbianus*	2	6

Notes:
[1] Ranked as "Vulnerable" in Nunavut.
[2] Ranked as "Threatened" in Canada (Government of Canada 2025).

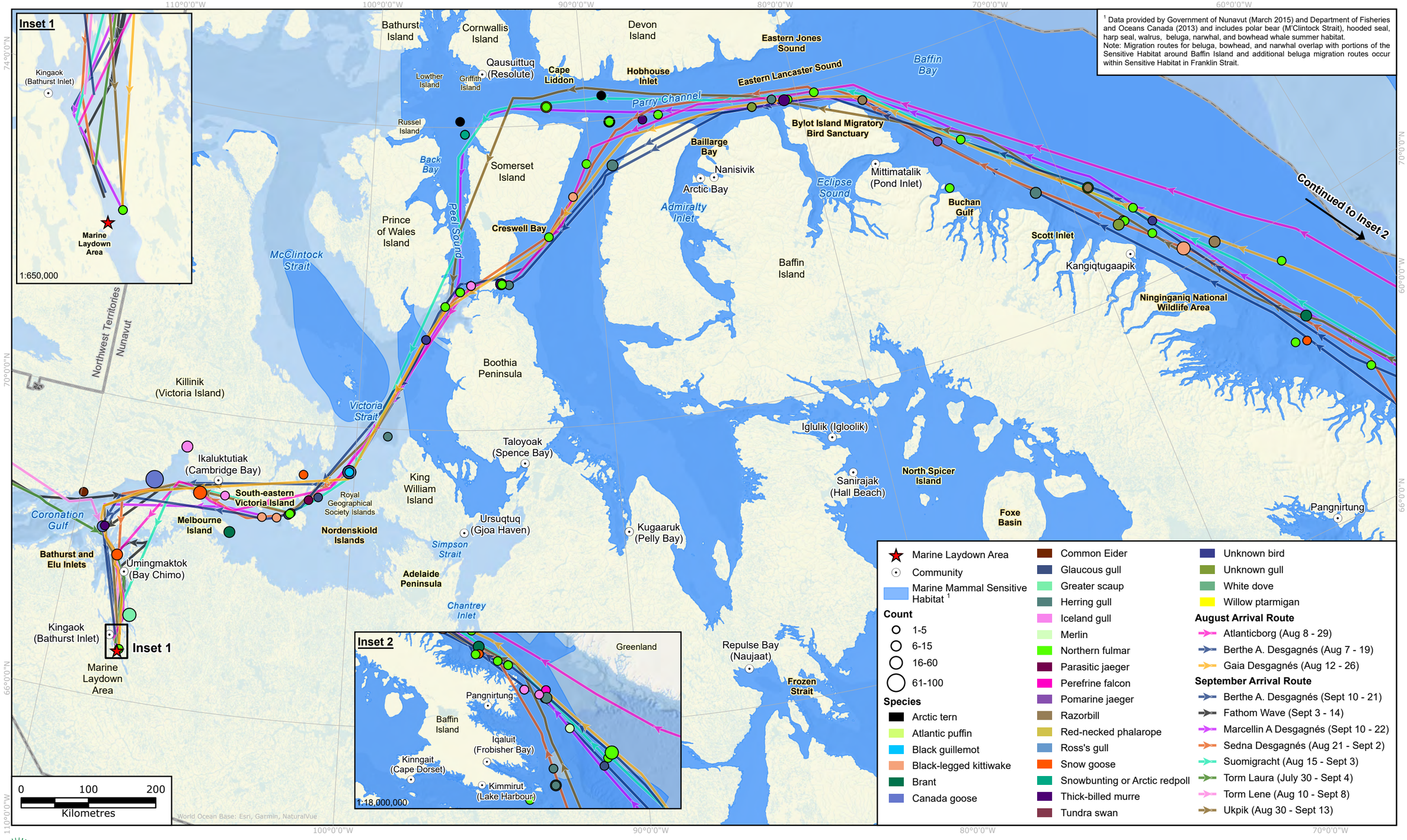
The most commonly observed bird species was Canada Goose (115 individuals observed over three separate sightings), followed by Northern Fulmar (96 individuals observed over 32 separate sightings; *Fulmarus glacialis*), followed by Snow Goose (76 individuals observed over four observations), and Herring Gull (65 individuals observed over 15 separate sightings; *Larus argentatus*). Black-legged Kittiwake (*Rissa tridactyla*), Glaucous Gull (*Glaucous gull*), Snow Goose, and Canada Goose were also recorded in groups of 25 or more individuals. Two species observed in 2024 are territorially listed as vulnerable (CESCC 2022): one sighting of one Peregrine Falcon, and two sightings of Common Eider (22 individuals over two separate sightings). One species observed in 2024 is listed federally as threatened (Government of Canada 2025): one sighting of one individual Ross's Gull. The only observations recorded within Bathurst Inlet were one sighting of Northern Fulmar and one sighting of Greater Scaup, with Northern Fulmar sighted near the MLA (Figure 8.2-4). No mitigative measures or ship strikes were recorded, and as such, no adaptive management measures were triggered by this program.

8.3 SEAL LAIR MITIGATION AND MONITORING

In 2024, B2Gold Nunavut did not construct the on-ice airstrip at the MLA and construction of the WIR along Bathurst Inlet was completed prior to February 15; therefore, no pre-construction surveys were required.

As part of the operation of the MLA, B2Gold Nunavut may construct an on-ice landing strip for aircraft on the sea ice in front of the MLA and may construct a WIR to transport equipment and supplies from the MLA to the Goose site. The WIR travels south on sea ice from the MLA to the mouth of the Western River before heading inland. Construction of both on-ice infrastructure is generally scheduled for December and January of each year they are required, which is prior to the seal pupping season (which begins approximately February 15).

FIGURE 8.2-4 SEABIRD OBSERVATIONS DURING SHIPPING, AUGUST TO OCTOBER, 2024



ERM

CLIENT: B2Gold
GIS NUMBER: BAC-23-641-04

DATE: 03/06/2025

PROJECTION: Canada Lambert Conformal Conic
SCALE: 1:5,250,000 when printed at 11x17

NIRB Condition #63 and Section 14.2.2.3 of the WMMP Plan (B2Gold 2024a) indicate that if construction of the on-ice landing strip or the WIR occurs during the seal pupping period (i.e., after February 15), then pre-construction surveys will be conducted, and construction will be altered to avoid any identified seal lairs. As construction of the WIR between the MLA and the Western River occurred prior to February 15 in 2024, no pre-construction surveys were required.

8.4 INCIDENTAL OBSERVATIONS

All personnel are responsible for recording wildlife sightings in the camp's wildlife logs (Appendix I). These logs provide an indication of the wildlife species that occur in proximity to and interact with the Back River Mine. Section 3.10 summarizes the number of personnel onsite collecting incidental sightings.

8.4.1 METHODS

All personnel are expected to report incidental observations of marine mammals. Incidental observation reports include location (GPS coordinates), date, time, species, number observed, behaviour, and any other descriptive information regarding the sighting.

Incidental observations were recorded in accordance with and using the data sheet provided in the Incidental Wildlife Observations SOP (B2Gold 2024k).

8.4.2 RESULTS AND DISCUSSION

In 2024, one incidental observation of a ringed seal (April 22) and one observation of a bearded seal (April 29) were recorded by site personnel near the WIR on Bathurst Inlet (Appendix I). All sightings were on the ice in Bathurst Inlet. No other sightings of marine mammals were recorded by site personnel in 2024.

9. WILDLIFE INCIDENTS AND MORTALITIES

Wildlife incidents and mortalities are recorded by B2Gold Nunavut and are reported in accordance with NIRB Conditions #46 and #59. An incident is an interaction where there is an active deterrent action, or if direct harm, injury, damage, or wildlife mortality occurs. Various processes are in place and are undertaken by B2Gold Nunavut to mitigate for interactions, incidents, and mortalities.

During the 2024 reporting period, there were a total of 29 wildlife incidents that involved the use of deterrents or hazing (Table 9-1). Types of deterrence used in 2024 included bear bangers, truck and air horns, rubber bullets, helicopters, trucks, yelling, jumping up and down, and waving sticks with ribbons attached. Deterrents were deployed to deter wolverines, (n = 10), wolves (n = 8), bears (n = 6), and caribou (n = 5). Deterrents were used on bears six times, which included helicopter and bear bangers. For wolves, deterrents were used eight times and included the use of truck horns, bear bangers, helicopters, and trucks. Helicopters were used as a deterrent three times for bears to deter animals away from infrastructure, such as the incinerator at Goose. A helicopter was used once to deter a wolf, which was for personnel safety as the wolf was displaying predatory behavior. Deterrent for bears and wolves were successful each time and resulted in the animals moving away without incident.

TABLE 9-1 WILDLIFE INCIDENTS INVOLVING DETERRENCE 2024

Date of Incident	Location	Species	Scientific Name	Number of Individuals	Deterrence Method
February 9	Goose Lake—Haul Road	Grey wolf	*Canis lupus*	1	Truck horn
February 17	Goose Lake Main	Wolverine	*Gulo gulo*	1	Jumping up and down on loading dock
February 17	Goose Lake Main	Wolverine	*Gulo gulo*	1	One bear banger deployed
March 14	Goose Lake Exploration	Wolverine	*Gulo gulo*	1	One bear banger deployed
March 18	Goose Lake Diversion Bern Road	Grey wolf	*Canis lupus*	1	Truck horn, one bear banger deployed
April 6	Goose Lower Camp	Wolverine	*Gulo gulo*	1	Airhorn
April 9	Old Camp Incinerator	Wolverine	*Gulo gulo*	2	Two bear bangers deployed
April 9	Old Camp Incinerator	Wolverine	*Gulo gulo*	1	Rubber bullet and bear banger deployed
April 11	Old Camp Incinerator	Wolverine	*Gulo gulo*	1	Air horn and bear banger deployed
April 11	Old Camp Incinerator	Wolverine	*Gulo gulo*	1	Rubber bullet and two bear bangers deployed

Date of Incident	Location	Species	Scientific Name	Number of Individuals	Deterrence Method
April 24	Goose Lower Camp	Wolverine	*Gulo gulo*	1	One bear banger deployed
April 29	Incinerator	Wolverine	*Gulo gulo*	1	One bear banger deployed
May 18	Goose Lake	Grizzly bear	*Ursus arctos horribilis*	1	Five bear bangers and helicopter deployed
June 6	Goose Lake	Grey wolf	*Canis lupus*	1	One bear banger and helicopter deployed
June 21	Goose Lake—Exploration side	Grizzly bear	*Ursus arctos horribilis*	1	Helicopter deployed
June 21	Incinerator—Exploration	Grizzly bear	*Ursus arctos horribilis*	1	Helicopter deployed
June 23	Incinerator and New Landfill	Grey wolf	*Canis lupus*	1	Two bear bangers deployed
June 27	WIR	Grey wolf	*Canis lupus*	1	Helicopter deployed
July 1	Goose Airstrip	Caribou	*Rangifer tarandus groenlandicus*	1	Humans yelling and waving sticks
July 2	Goose Airstrip	Caribou	*Rangifer tarandus groenlandicus*	1	Humans yelling and waving sticks with flagging
July 3	Goose Airstrip	Caribou	*Rangifer tarandus groenlandicus*	1	No deterrents deployed
July 4	Goose Airstrip	Caribou	*Rangifer tarandus groenlandicus*	1	Humans yelling and waving sticks, two bear bangers deployed in the direction of the animal, but not at the animal
August 1	BB13	Caribou	*Rangifer tarandus groenlandicus*	1	Two bear bangers deployed in the direction of the animal, but not at it
August 1	Goose Boulder	Grizzly bear	*Ursus arctos horribilis*	1	Helicopter deployed
September 16	Goose Main Camp	Grey wolf	*Canis lupus*	1	Vehicle
October 1	Goose Main Camp	Grizzly bear	*Ursus arctos horribilis*	4	Two bear bangers deployed

Date of Incident	Location	Species	Scientific Name	Number of Individuals	Deterrence Method
October 2	West of Camp (by annex/mine dry)	Grizzly bear	*Ursus arctos horribilis*	4	One bear banger deployed
October 7	West of Camp (by annex/mine dry)	Grey wolf	*Canis lupus*	1	One bear banger deployed
November 10	Goose Lake—New Emulsion Plant	Grey wolf	*Canis lupus*	1	One bear banger deployed

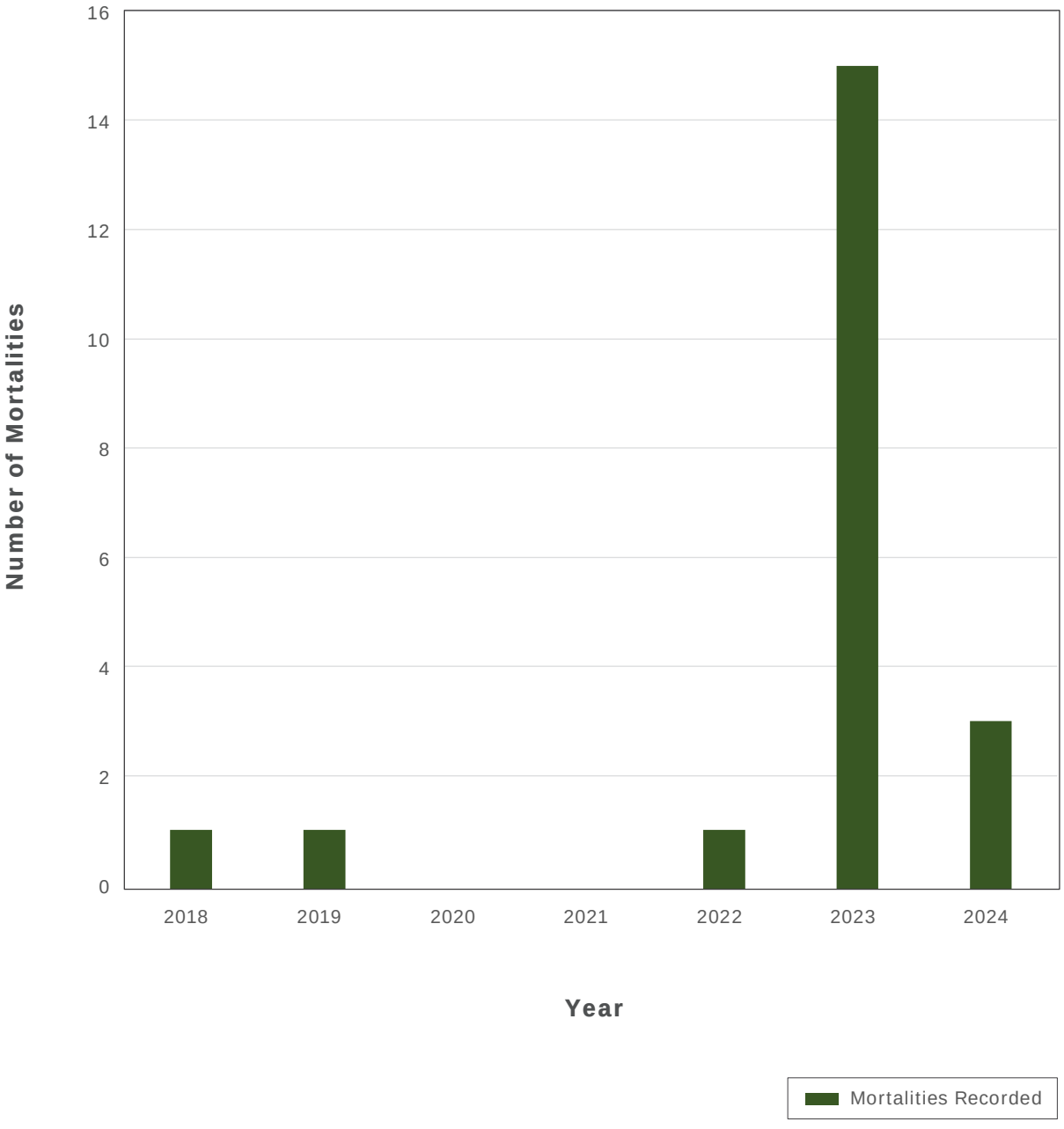
In April 2024, wolverine were incidentally observed around the incinerator and it was noted that on one occasion were able to access food waste at the incinerator, as discussed in Section 2.6 and 5.6. Mitigative measures were implemented in April 2024, which included continuous monitoring by B2Gold Nunavut Environment Staff and securing of the incinerator to deter wolverine, as described in Section 2.6. To discourage this wolverine from accessing the incinerator, deterrence methods were used on seven occasions in April. The implementation of mitigative measures along with the successful use of deterrence reduced wolverine attraction to the incinerator, with wolverine only being observed three times at Goose after April, with all individuals recorded passing through the area and not being near the incinerator. Additionally, no deterrence of wolverine was required at Goose following April.

A caribou lingering near the Goose Airstrip from July 1 to July 4, 2024, required the use of gentle hazing methods due to its close proximity to the airstrip with inbound air traffic (Section 2.4). On three separate occasions, personnel implemented hazing to push the animal away from the airstrip, including yelling, waving sticks with flagging tape, and walking towards the animal. On all occasions, the caribou moved away from the airstrip and measures were determined to be effective. An incident at the Goose Airstrip on July 4 detailed a single caribou grazing towards the airstrip and B2Gold Staff effectively used the waving of a stick with flagging, shouting, and two bear bangers to successfully deter the caribou from the airstrip. One incident reported on August 1, 2024, noted deploying two bear bangers to deter a territorial caribou at BB13 at Goose. No other hazing was required for caribou in 2024.

During the 2024 reporting period, there were a total of three wildlife mortalities reported at the Back River Mine (Table 9-2; Figure 9-1), lower than the 14 reported in 2023. Mortalities occurred as a result of natural predation (two), and euthanasia (one).

One individual of an unknown ptarmigan species was found deceased on the roof of Main Camp on September 7, 2024, with natural predation as the cause of death. That same day, observations of one adult and one juvenile Peregrine Falcon occurred in the area, and it is believed that the falcons had predated upon the ptarmigan. After 48 hours and confirmation that the Peregrine Falcons were not feeding on the ptarmigan, the ptarmigan was removed from the roof and disposed of in the incinerator.

FIGURE 9-1 NUMBER OF WILDLIFE MORTALITIES RECORDED, 2018 TO 2024



CLIENT: B2Gold Nunavut
GRAPHICS NUMBER: BAC-25ERM-003:6

TABLE 9-2 WILDLIFE MORTALITIES 2024

Date of Incident	Location	Species	Scientific Name	Number of Individuals	Cause of Death	Reporting
September 7	Roof of Goose Main Camp	Ptarmigan		1	Natural predation	Internally
September 12	Road Machine Road	Arctic hare	*Lepus arcticus*	1	Natural predation	Internally
November 12	Exploration Camp	Grey wolf	*Canis lupus*	1	Euthanasia	Internally, GN, KitIA

An Arctic hare was found deceased on the side of the haul road on September 12, 2024, with cause of death as natural predation. The body was removed and brought to the incinerator to be disposed of.

One grey wolf was euthanized on November 12, 2024, due to atypical behaviour displays and unhealthy physiological appearance. Behaviours observed by B2Gold Environment staff included the wolf limping and staggering when walking, appearing distressed and confused, shaking its fur repeatedly and head tilted, gaping its jaw, bedding itself in the snow for extended periods of time, walking a short distance and bedding down again, and negligible response to external stimuli while bedded (including loud noises, humans working nearby, truck horn, and ravens within feet of the animal). The wolf was closely monitored while the Environment Superintendent sought further guidance from the Government of Nunavut Kitikmeot Regional Wildlife Manager. It was agreed upon that in the interest of public safety and the animal's welfare, that the animal be euthanized in a humane manner. The animal was dispatched and collected in heavy duty plastic garbage bags and brought to the incinerator for proper disposal, as per direction from the Government of Nunavut's Department of Environment carnivore wildlife biologist.

All mortality events were recorded and reported internally to Environment Department staff and followed methods and guidelines provided in B2Gold Nunavut's onsite Incidental Wildlife Observations SOP (B2Gold 2024k), which includes instructions for recording incidents and mortalities. The incident reports for wildlife mortalities in 2024 are included in Appendix S.

One incident report for the euthanasia of the grey wolf was submitted externally to the Government of Nunavut and the KitIA.

In accordance with NIRB Condition #46, incident reports contain sufficient detail to demonstrate how monitoring and mitigation measures failed to prevent the mortality, as well as information pertaining to what measures were put in place to prevent the incident from reoccurring. Incident reporting was conducted for all mortalities and adaptive management measures were recorded when they were implemented. Improvements were made to the incident reporting procedures for 2024, which required the reporting personnel to explain both what adaptive management measures were conducted, or why no additional measures were required, to ensure these details are available for future reports.

In accordance with NIRB Condition #59, all incidents of migratory bird mortalities associated with project activities will be recorded and reported to ECCC. In 2024, there were no migratory bird mortalities associated with Mine activities, resulting in no reports to ECCC.

10. SPECIES OF CONSERVATION CONCERN

NIRB Condition #55 requires B2Gold Nunavut to ensure mitigation and monitoring is updated regularly to maintain consistency with changes to species at risk listings. Species of conservation concern known to occur or potentially occurring in the Back River Mine area are presented in Table 10-1. The table of species at risk is updated annually to reflect the most up-to-date information for species, statuses, and known/potential occurrence at the Mine.

Species of conservation concern include those listed in Nunavut by the Canadian Endangered Species Conservation Council (CESCC 2022), or those listed as Endangered, Threatened, or Special Concern on Schedule 1 of SARA (Government of Canada 2025). Changes to the territorial or federal species statuses since the 2023 WMMP report are highlighted in Table 10-1 and include the following status changes:

- Territorial Status Updates (NatureServe 2025):
  - Caribou (Dolphin and Union herd): Vulnerable to Imperilled
- Federal Status Updates (Government of Canada 2025):
  - Bowhead whale (*Balaena mysticetus*): Special Concern to Not Listed;
  - Killer whale (*Orcinus orca*): Special Concern to Not Listed; and
  - Narwhal (*Monodon monoceros*): Special Concern to Not at Risk.

Multiple updated recovery strategies, action plans, or management plans for the listed species have been made available since 2013. Updates for species observed at the Back River Mine include management plans made available for Peregrine Falcon in 2017 (ECCC 2017a) and Short-eared Owl in 2018 (ECCC 2018a). Updates for species that may occur at the Back River Mine or be encountered along the shipping route include management plans made available for barren-ground caribou, Dolphin and Union population, in 2018 (ECCC 2018b), Peary caribou in 2022 (ECCC 2022a), and Red-necked Phalarope (*Phalaropus lobatus*) in 2022 (ECCC 2023b), Buff-breasted Sandpiper (*Tryngites subruficollis*) in 2022 (ECCC 2022b), and Horned Grebe in 2022 (ECCC 2022c). Additionally, a recovery strategy and management plan for the Red Knot was made available in 2017 (ECCC 2017b). Recovery strategies were made available for Ross's Gull (*Rhodostethia rosea*) in 2007 (ECCC 2007) and Ivory Gull *(Pagophila eburnea*) in 2014 (ECCC 2014). The WMMP Plan (B2Gold 2024a) includes mitigation, management, and monitoring activities for each of the species at risk groups listed in Table 10-1. No additional mitigation, management, or monitoring is required due to the change in status listed above.

TABLE 10-1 SPECIES OF CONSERVATION CONCERN KNOWN OR POTENTIALLY OCCURRING AT THE BACK RIVER MINE, 2024

VEC or VEC Group	Species	Scientific Name	Federal Designation		Territorial Status[1]
			COSEWIC Status	*Species at Risk Act* Schedule[1]	
Species Confirmed to Occur in the Back River Mine Terrestrial or Marine Regional Study Areas					
Caribou (Beverly/ Ahiak Herd and Bathurst Herd)	n/a	*Rangifer tarandus groenlandicus*	Threatened	Not Listed	Vulnerable
Grizzly Bear	n/a	*Ursus arctos horribilis*	Special Concern	Special Concern	Vulnerable
Wolverine	n/a	*Gulo gulo*	Special Concern	Special Concern	Vulnerable
Upland Birds	American Golden-plover	*Pluvialis dominica*	Not Listed	Not Listed	Vulnerable
	Harris's Sparrow	*Zonotrichia querula*	Special Concern	Special Concern	Apparently Secure
	Hoary Redpoll[2]	*Carduelis hornemanni*	Not Listed	Not Listed	Vulnerable
	Least Sandpiper	*Calidris minutilla*	Not Listed	Not Listed	Secure
	Red-necked Phalarope	*Phalaropus lobatus*	Special Concern	Special Concern	Vulnerable
	Semipalmated Sandpiper	*Calidris pusilla*	Not Listed	Not Listed	Vulnerable
Raptors	Golden Eagle	*Aquila chrysaetos*	Not at Risk	Not Listed	Vulnerable
	Peregrine Falcon[2]	*Falco peregrinus anatum/tundrius*	Not at Risk	Not Listed	Apparently Secure
	Short-eared Owl	*Asio flammeus*	Threatened	Special Concern	Vulnerable
Seabirds and Seaducks	Common Eider[2]	*Somateria mollissima*	Not Listed	Not Listed	Vulnerable
Species that Could Occur in the Back River Mine Terrestrial or Marine Regional Study Areas					
Upland Birds	Black-bellied Plover[3]	*Pluvialis squatarola*	Not Listed	Not Listed	Vulnerable
	Buff-breasted Sandpiper	*Tryngites subruficollis*	Special Concern	Special Concern	Vulnerable
	Ruddy Turnstone	*Arenaria interpres*	Not Listed	Not Listed	Vulnerable
	Red Knot	*Calidris canutus rufa* (ssp. DU3/4/5)	Endangered / Special Concern / Endangered	Endangered / Not Listed	Vulnerable
	Red Knot	*Calidris canutus islandica*	Not at Risk	Special Concern	Apparently Secure
	Sanderling	*Calidris alba*	Not Listed	Not Listed	Vulnerable
	Snow Bunting	*Plectrophenax nivalis*	Not Listed	Not Listed	Apparently Secure
Species Confirmed to Occur along the Shipping Route					
Marine Mammals	Bowhead whale (Eastern Canada—West Greenland population)	*Balaena mysticetus*	Not Listed	Not Listed	Vulnerable
	Beluga (Eastern High Arctic—Baffin Bay population)	*Delphinapterus leucas*	Special Concern	Not Listed	Vulnerable
	Fin whale (Atlantic population)	*Balaenoptera physalus*	Special Concern	Special Concern	Unrankable
	Killer Whale (Northwest Atlantic / Eastern Arctic population)	*Orcinus orca*	Not Listed	Not Listed	Imperiled
	Narwhal	*Monodon monoceros*	Not at Risk	Not Listed	Vulnerable

VEC or VEC Group	Species	Scientific Name	Federal Designation		Territorial Status[1]
			COSEWIC Status	*Species at Risk Act* Schedule[1]	
Species Confirmed to Occur along the Shipping Route *(cont'd)*					
Marine Mammals *(cont'd)*	Ringed seal	*Pusa hispida*	Special Concern	Not Listed	Apparently Secure
	Polar bear	*Ursus maritimus*	Special Concern	Special Concern	Vulnerable
Species that Could Be Encountered along the Shipping Route					
Caribou (Dolphin and Union Herd)	n/a	*Rangifer taranduas groenlandicus*	Endangered	Special Concern	Imperiled
Caribou (Peary Caribou)	n/a	*Rangifer tarandus pearyi*	Threatened	Threatened	Imperiled
Waterbirds	Horned Grebe	*Podiceps auritus*	Special Concern	Not Listed	Unrankable
Upland Birds	Hudsonian Godwit	*Limosa haemastica*	Threatened	Not Listed	Unrankable
	Lesser Yellowlegs	*Tringa flavipes*	Threatened	Not Listed	Vulnerable
Seabirds and Seaducks	King Eider	*Somateria spectabilis*	Not Listed	Not Listed	Vulnerable
	Ivory Gull	*Pagophila eburnea*	Endangered	Endangered	Critically Imperiled
	Ross's Gull	*Rhodostethia rosea*	Endangered	Threatened	Critically Imperiled
Marine Mammals	Walrus (High Arctic population)	*Odobenus rosmarus rosmarus*	Special Concern	Not Listed	Vulnerable

Notes:
Shaded cells refer to species' statuses that have changed or been added since the 2023 WMMP Report.
[1] Territorial status is current to 2024 and updated based on species search using NatureServe (NatureServe 2025).
[2] Species have also been encountered along the shipping routes.
[3] Species are also likely to be encountered along the shipping routes.

11. REFERENCES

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