

## **Appendix 32**

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# **Meadowbank and Whale Tail 2023 Marine Mammal and Seabird Report**

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# Meadowbank and Meliadine Mines

Marine Mammal and Seabird  
Annual Report, 2023

PREPARED FOR



**AGNICO EAGLE**

Agnico Eagle Mines Limited

DATE

March 2024

REFERENCE

0692512



# Meadowbank and Meliadine Mines

## Marine Mammal and Seabird Annual Report, 2023

March 2024

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CLIENT: Agnico Eagle Mines Limited  
PROJECT NO: 0692512

DATE: March 2024

VERSION: D.1

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## ACRONYMS AND ABBREVIATIONS

Agnico Eagle	Agnico Eagle Mines Limited
AIC	Akaike's Information Criterion
AIS	Automatic Identification System
CI	Confidence Interval
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
ECCC	Environment and Climate Change Canada
ECSAS	Eastern Canada Seabirds at Sea
GIS	Geographic Information System
GPS	Global Positioning System
km	Kilometre
m	Metre
MEMP	Marine Environmental Management Plan
MMMMP	Marine Mammal Management and Monitoring Plan
MMSO	Marine Mammal and Seabird Observer
NIRB	Nunavut Impact Review Board
PC	Project Certificate
RSA	Regional Study Area
SARA	<i>Species at Risk Act</i>
SE	Standard Error
SMP	Shipping Management Plan
SOP	Standard Operating Procedure
VTS	Vessel Traffic Services
Woodward	Woodward Group and Companies

## EXECUTIVE SUMMARY

Agnico Eagle Mines Limited (Agnico Eagle) operates two mines in eastern Nunavut: the Meadowbank Complex (Meadowbank and Whale Tail Mines), approximately 85 kilometres (km) north of Baker Lake, and the Meliadine Mine, approximately 25 km north of Rankin Inlet. Agnico Eagle supplies these projects through annual sea-lifts during the open water season. The shipping company Groupe Desgagnés ships dry cargo, and the Woodward Group of Companies (Woodward) supplies fuel to Meadowbank and Meliadine.

Agnico Eagle holds three Project Certificates (PCs) from the Nunavut Impact Review Board (NIRB) for Meadowbank Mine (No. 004 and 008) and the Meliadine Mine (No. 006). These PCs include conditions related to protection of marine mammals and seabirds, including avoiding sensitive breeding and habitat areas for marine mammals and seabirds and conducting a Marine Mammal and Seabird Observer (MMSO) program by vessel crew (see Table 1 for Compliance to Project Conditions).

The objective of this report is to present a summary of the MMSO data collected by Groupe Desgagnés and Woodward during the 2023 MMSO program to support Agnico Eagle's 2023 annual report to the NIRB. Results from the previous years for Meliadine (2017 to 2022) and Meadowbank (2018 to 2022) are also provided as a comparison between years.

From 2020 through to 2023, ERM provided updated training materials for vessel crew that were delivered by Agnico Eagle to shipping companies supplying Meadowbank and Meliadine. These training materials were provided to Groupe Desgagnés and Woodward and included updated instructions for vessel crew on: 1) setbacks from sensitive marine wildlife habitats such as marine mammal haul-outs and seabird colonies, 2) mitigation procedures should marine mammals or seabirds be observed in or near the vessel path, and 3) training materials for dedicated MMSO crew observers including detailed methods for marine mammal and seabird surveys, data sheets, and training videos.

The 2023 MMSO program continues to see greater survey effort compared to pre-2020. A total of 23 Groupe Desgagnés and Woodward vessels serviced the Projects between July and October during the 2023 shipping season: nine for Meadowbank, six for Meliadine, and eight serviced both Meadowbank and Meliadine. Datasheets were obtained from 18 of the 23 vessels in 2023, which is similar to the last three years (21 of the 27 vessels in 2022, 23 of the 29 vessels in 2021, and 19 of the 25 vessels in 2020), , all of which are greater than previous years (six vessels providing datasheets in 2019, and only two participating vessels in 2018).



TABLE 1 PROJECT CERTIFICATES, CONDITIONS, COMPLIANCE, AND DOCUMENT SECTION

Project Certificate and Condition #	Compliance	Section
<p><b>Meadowbank PC 004, Condition 36</b></p> <p>Cumberland shall ensure the placement of local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet.</p>	<p><b>In Compliance</b></p> <p>Local area marine mammal monitors have conducted surveys aboard vessels transiting between Chesterfield Inlet and Baker Lake between 2008 and 2019 and 2022 to 2023. During 2020 and 2021, due to COVID-19, local monitors could not board vessels and vessel crew conducted the monitoring.</p>	<p>1.6 Overview</p> <p>3.4 Results</p>
<p><b>Meadowbank PC 004, Condition 41</b></p> <p>Subject to vessel and human safety considerations, Cumberland shall require shippers carrying cargo to the Project through Chesterfield Inlet to follow the following mitigation procedures in the event that marine mammals are in the vicinity of the shipping activities:</p> <ol style="list-style-type: none"> <li>Wildlife will be given right of way;</li> <li>Ships will maintain a straight course, constant speed, and will avoid erratic behaviour; and</li> <li>When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will stop until the mammals have moved away from the area.</li> </ol>	<p><b>In Compliance</b></p> <p>In 2020, Agnico Eagle updated the maps and training materials showing the setbacks and mitigation measures when marine mammals and seabirds are observed. These materials were presented to Groupe Desgagnés and Woodward for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut mines from 2020 through 2023.</p> <p>Vessel tracks, where sufficient data are available, show vessels avoiding sensitive areas for marine wildlife.</p>	<p>1.3 Training</p> <p>1.4 Mitigation</p> <p>3.1 Results</p>
<p><b>Whale Tail PC 008, Condition 38</b></p> <p>The Proponent shall ensure that marine shipping activities avoid sensitive wildlife habitat and species along the shipping route and use a routing south of Coats Island as the primary shipping route, subject to vessel and human safety considerations.</p>	<p><b>In Compliance</b></p> <p>In 2023, Agnico Eagle emphasized the importance of routing south of Coats Island. As a result, captains were required to travel north of Coats Island on five occasions due to safety issues associated with inclement weather south of Coats Island.</p>	<p>3.1 Results</p>
<p><b>Whale Tail PC 008, Condition 39</b></p> <p>The Proponent shall ensure that, subject to vessel safety requirements, a setback distance of at least 500 m is maintained from colonies and aggregations of seabirds and marine mammals during Project shipping transiting through Hudson Strait, Hudson Bay, and Chesterfield Inlet.</p>	<p><b>In Compliance</b></p> <p>In 2020, Agnico Eagle updated the maps and training materials showing the setbacks and mitigation measures when marine mammals and seabirds are observed. These materials were presented to Groupe Desgagnés and Woodward for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut mines from 2020 through 2023.</p> <p>Vessel tracks, where sufficient data are available, show vessels avoiding sensitive areas for marine wildlife.</p>	<p>1.3 Training</p> <p>1.4 Mitigation</p> <p>3.1 Results</p>

Project Certificate and Condition #	Compliance	Section
<p><b>Whale Tail PC 008, Condition 40</b></p> <p>The Proponent shall develop and implement a ship-based marine mammal monitoring program, as part of a Marine Mammal Management and Monitoring Plan, in consultation with Fisheries and Oceans Canada, communities, and other interested parties. The Proponent shall report any accidental contact by project vessels with marine mammals or seabird colonies to applicable responsible authorities including Fisheries and Oceans Canada and Environment and Climate Change Canada.</p>	<p><b>In Compliance</b></p> <p>In 2020, Agnico Eagle updated the training materials for MMSO monitoring. These materials were presented to Groupe Desgagnés and Woodward for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut projects from 2020 through 2023.</p> <p>Results of MMSO monitoring show compliance with updated training materials.</p> <p>No vessel strikes with marine mammals or seabirds were reported.</p>	<p>1.3 Training 1.4 Mitigation 3.2 Marine Mammal Results 3.3 Seabird Results Appendices A, B, C (Training documents including Mitigation Summary and SOPs)</p>
<p><b>Meliadine PC 006, Condition 82</b></p> <p>The Proponent shall require all contracted shipping companies to provide full-time marine wildlife monitoring using trained observers and established data collection and recording protocols. Monitoring plans should include provisions for all <i>Species At Risk Act</i> (SARA) and for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed species (birds and mammals).</p>	<p><b>In Compliance</b></p> <p>In 2020, Agnico Eagle updated the training materials for MMSO monitoring. These materials were presented to Groupe Desgagnés and Woodward for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut mines from 2020 through 2023.</p> <p>Results of MMSO monitoring show compliance with updated training materials.</p> <p>No vessel strikes with marine mammals or marine birds were reported.</p>	<p>1.3 Training 1.4 Mitigation 3.2 Marine Mammal Results 3.3 Seabird Results</p>
<p><b>Meliadine PC 006, Condition 83</b></p> <p>The Proponent shall ensure that, subject to vessel and human safety considerations, all Project shipping adhere to the following mitigation procedures while in the vicinity of marine mammals (including polar bear) and birds:</p> <ol style="list-style-type: none"> <li>Marine mammals will be given right of way;</li> <li>Ships will, when possible, maintain a straight course and constant speed, avoiding erratic behaviour; and</li> <li>When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will implement appropriate measures to mitigate disturbance, including stoppage of movement until wildlife have moved away from the immediate area.</li> </ol>	<p><b>In Compliance</b></p> <p>In 2020, Agnico Eagle updated the maps and training materials showing the setbacks and mitigation measures when marine mammals and seabirds are observed. These materials were presented to Groupe Desgagnés and Woodward for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut mines from 2020 through 2023.</p> <p>Vessel tracks, where sufficient data are available, show vessels avoiding sensitive areas for marine wildlife.</p>	<p>1.3 Training 1.4 Mitigation 3.1 Results</p>

## Setbacks from Sensitive Habitats

In compliance with Whale Tail Mine Certificate No. 008, Term and Condition 39, project vessels must follow a setback distance of 500 m from colonies and aggregations of seabirds and marine mammals while transiting through the Hudson Strait, Hudson Bay, and Chesterfield Inlet. In addition, vessels must follow a setback distance of 2 km from Marble Island, as per Meliadine's Shipping Management Plan (Agnico Eagle 2022b).

Vessel tracks were mapped along with identified sensitive areas for wildlife; where detailed data was available, vessels were shown to avoid these areas where safe to do so. Groupe Desgagnés and/or Woodward vessel tracks appeared to potentially cross through the 2 km setback polygon at Marble Island on 10 occasions, and at the Coats Island setback polygon on two occasions. However, when examining the data, it appears that a vessel only entered the 2 km Marble Island buffer on two occasions. Track data is based on satellite AIS (Automatic Identification System); therefore, ship track intersections likely occurred due to lack of ship track resolution and the intersection of existing points to create a continuous shipping track. Agnico Eagle will continue to investigate alternative commercial AIS suppliers in 2024; however, Vesseltracker remains the most reliable at this time. In addition, Agnico Eagle continues to train vessel captain regularly and remind them of the importance of maintain sensitive habitat buffers prior to the start of the shipping season.

## Vessel Mitigation

Vessels are required to transit south of Coats Island whenever the weather is safe to do so. The majority (78%) of vessels servicing the Meadowbank and Meliadine projects in 2023 travelled south of Coats Island, apart from five occasions, four of which occurred in June (one occasion) and July (three occasions) due to shipping route conditions, and the other one occurred in October due to inclement weather.

## Marine Mammal Monitoring

In 2023, 64 transects were surveyed for marine mammals, and 62 stationary surveys were completed. There was a total of 20 sightings (five during dedicated surveys and 15 incidentally) of marine mammals during the 2023 shipping season, compared to 32 (surveys and incidentally) in 2022, 35 (surveys and incidentally) in 2021, 12 (surveys and incidentally) in 2020, seven (all during surveys) in 2019, none in 2018, and six (all incidental) in 2017. The majority of all marine mammal sightings between 2017 and 2023 were recorded in the Hudson Strait or near Marble Island and Chesterfield Inlet. There is an insufficient number of marine mammal sightings recorded to conduct a density analysis. No marine mammal-vessel interactions (e.g., strikes) were recorded by Groupe Desgagnés or Woodward in 2023, or in previous years (2017 through 2022).

## Seabird Monitoring

No interactions between vessels and seabirds were recorded during the MMSO in 2023, or in previous years. Seabird survey effort on moving vessels in 2023 was lower than 2022 and 2021 but higher than early years, with 116 surveys completed with spatial effort. The decrease in moving vessel survey spatial effort is likely attributed to a more consistent adoption of new survey methods (reinforced in 2022 and 2023), an increase in errors on survey data sheets associated

with incorrect coordinates or missing coordinates, and on fewer vessels travelling to site in 2023 (23) compared to previous years (e.g., 27 vessels in 2022 and 29 vessels in 2021). Over six years of moving vessel surveys for seabirds between 2018 and 2023, 48 species and 10,608 individual birds were recorded. The surf scoter was observed for the first time during moving surveys in 2023. The most common species recorded in 2023 were northern fulmar, razorbill, herring gull, and Wilson's storm-petrel. In 2023 northern fulmar continued to be one of the most reported species. Herring gulls were reported in a higher abundance than previous years, however, unknown gulls were under reported compared to previous years suggesting surveyors may have been more likely to identify previously unknown individuals as herring gulls. Previous to 2023 both common and thick-billed murre were recorded in relatively high abundance, however, in 2023 during moving surveys there were only two observations for both species combined. This suggests that common and thick-billed murre may have occurred at lower abundances in 2023 or they were more likely to be misidentified.

Seabird detectability and density were estimated using models which account for lower detectability of birds with greater distance from survey transects. Detectability estimates were mostly consistent between years, with the highest estimate in 2022, followed by 2019 and 2021. The detectability estimate in 2023 was the second lowest since modelling started in 2018, however, 2023 had the second highest predicted seabird density in the same time span. Both the spatial effort of surveys in 2023 and the number of seabirds detected during moving surveys were lower than previous years. The differences in estimated density reflect variability in the effort and number of birds detected between years.

Stationary vessel survey effort was approximately 82% higher than in 2022 and this is due to more consistent reporting of survey effort. A total of 134 stationary surveys were completed in 2023 which was the most out of all years, however, survey effort was only the third highest. This could be attributed to fewer vessels overall travelling to site in 2023 and to a change in survey methods in 2022 for shorter consecutive surveys which was more successfully implemented in 2023. A total of 3,602 individuals from 39 species were recorded during stationary vessel surveys from 2019 to 2023. The detection rate for stationary vessel surveys more than half of that for moving vessel surveys. This result is generally consistent with the data, which indicates that both detections and number of birds recorded per survey were lower for stationary surveys compared to moving surveys.

### **Marine Wildlife Observations – Baker Lake**

Agnico Eagle conducts a program of community wildlife observers on barges ferrying supplies between Helicopter Island and Baker Lake within Chesterfield Inlet. Community wildlife observers record wildlife sightings incidentally. In 2023, incidental surveys were conducted over 27 days by local wildlife monitors between Helicopter Island and Baker Lake in July, August, and October. Wildlife were observed on 199 occasions in 2023. There were 195 separate sightings of birds (total of 663 individuals), one sighting of caribou (one individual), two sightings of muskox (13 individuals), and one sighting of an unknown seal species (one individual). The most frequently recorded birds were unknown gull species.

In addition to community wildlife observers, the shipping companies continued to record marine wildlife sightings while vessels were at anchor near Helicopter Island, or on the tugs/barges between Helicopter Island and Baker Lake to supplement the community observer effort. In 2023, crew members onboard the tugs (Atlantic Beech and Atlantic Elm) recorded a total of 36 incidental sightings while transiting between Helicopter Island and Baker Lake over 35 separate days between July 13 and August 31. Two marine mammals were recorded incidentally in July (one harbour seal and one bearded seal), and a total of 265 seabirds were recorded across 13 different species.

In addition to the incidental sightings by the barges, vessels also completed stationary surveys while anchored at Helicopter Island and moving transect surveys when conditions allowed. In 2023 there were 42 stationary surveys for marine mammals completed at Helicopter Island. No marine mammals were observed during any of these surveys. For seabirds, 94 stationary surveys were completed (one of which had temporal effort recorded) and 17 moving transect surveys. During stationary seabird surveys, 792 individuals across 10 different species were observed, and during moving transect surveys, 282 individual seabirds across 11 different species were observed.

# 1. INTRODUCTION

## 1.1 PROJECT BACKGROUND

Agnico Eagle Mines Limited (Agnico Eagle) contracts the shipping company Groupe Desgagnés to ship cargo and Woodward Group and Companies (Woodward) to ship fuel from Bécancour, Quebec, to its Nunavut Operations, Meadowbank and Meliadine. Since 2017, Agnico Eagle has required shipping companies to conduct vessel-based monitoring of marine mammals and seabirds using the vessel crew.

The Marine Mammal and Seabird Observer (MMSO) Annual Report summarizes results of the 2023 shipping season. The MMSO monitoring program and report satisfies the following Project Certificate Conditions from the Nunavut Impact Review Board (NIRB):

- Whale Tail NIRB Project Certificate No. 008, Terms and Conditions 38, 39, and 40 (NIRB 2020);
- Meliadine Mine NIRB Project Certificate No 006, Terms and Conditions 82 and 83 (NIRB 2022); and
- Meadowbank NIRB Project Certificate No. 004, Terms and Conditions 36 and 41 (NIRB 2018).

This monitoring program is described in:

- the Meadowbank Shipping Management Plan Version 4 (Agnico Eagle 2022a); and
- the Meliadine Shipping Management Plan Version 9 (Agnico Eagle 2022b).

In 2020, the MMSO program was improved following comments from interveners on previous years' MMSO reports. ERM worked with Agnico Eagle to:

- develop training materials, Standard Operating Procedures (SOPs), and data sheets for Groupe Desgagnés and Woodward personnel who would be acting as MMSO observers (Appendices A to C);
- develop mitigation SOPs for vessel crew when marine mammals and seabirds are observed; and
- develop and present training workshops for MMSO observers.

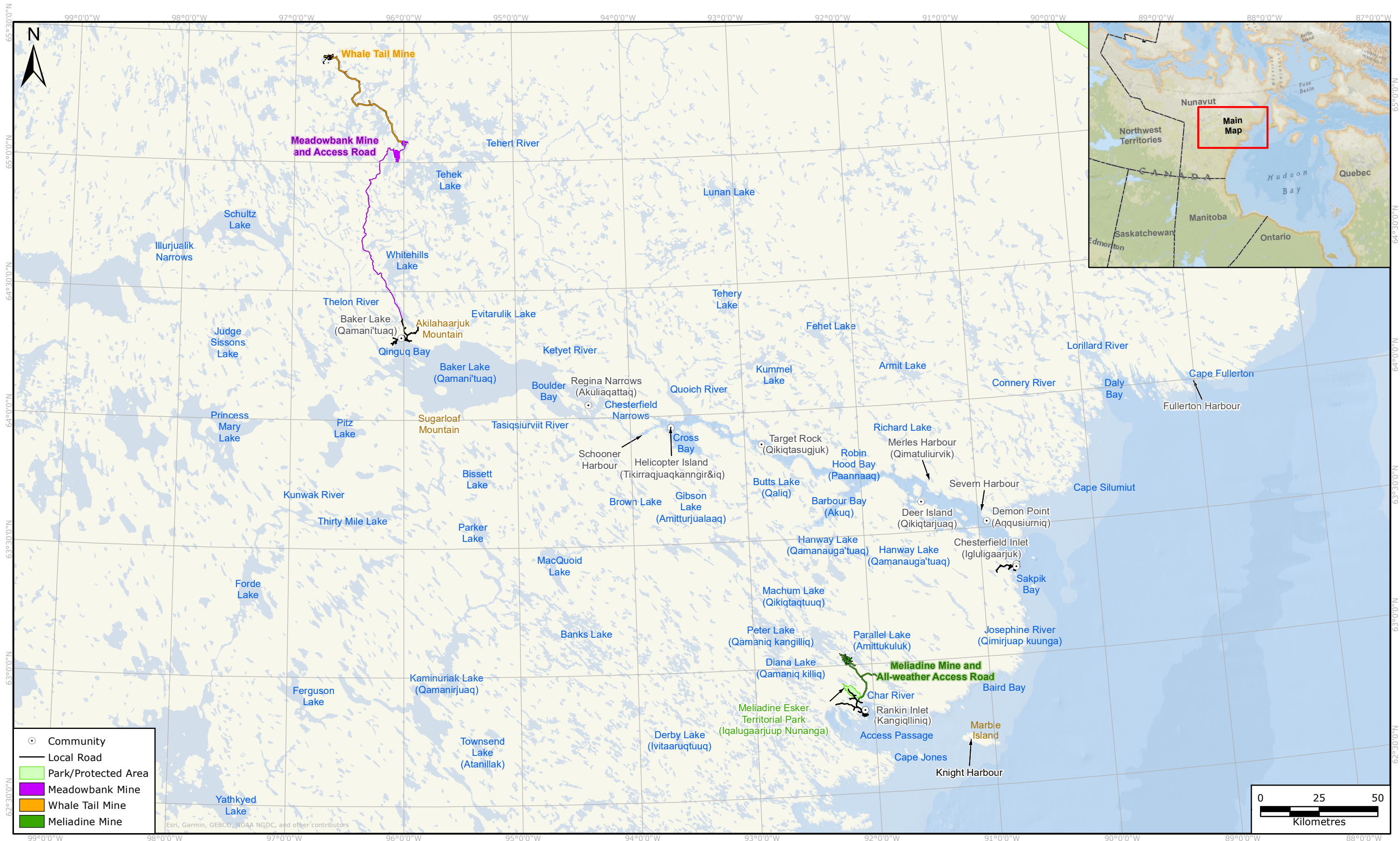
Since the requirements for the Meadowbank and Meliadine projects are very similar, and as initiated in 2020, the 2023 MMSO Annual Report addresses reporting for both projects.

### 1.1.1 AGNICO EAGLE MEADOWBANK COMPLEX

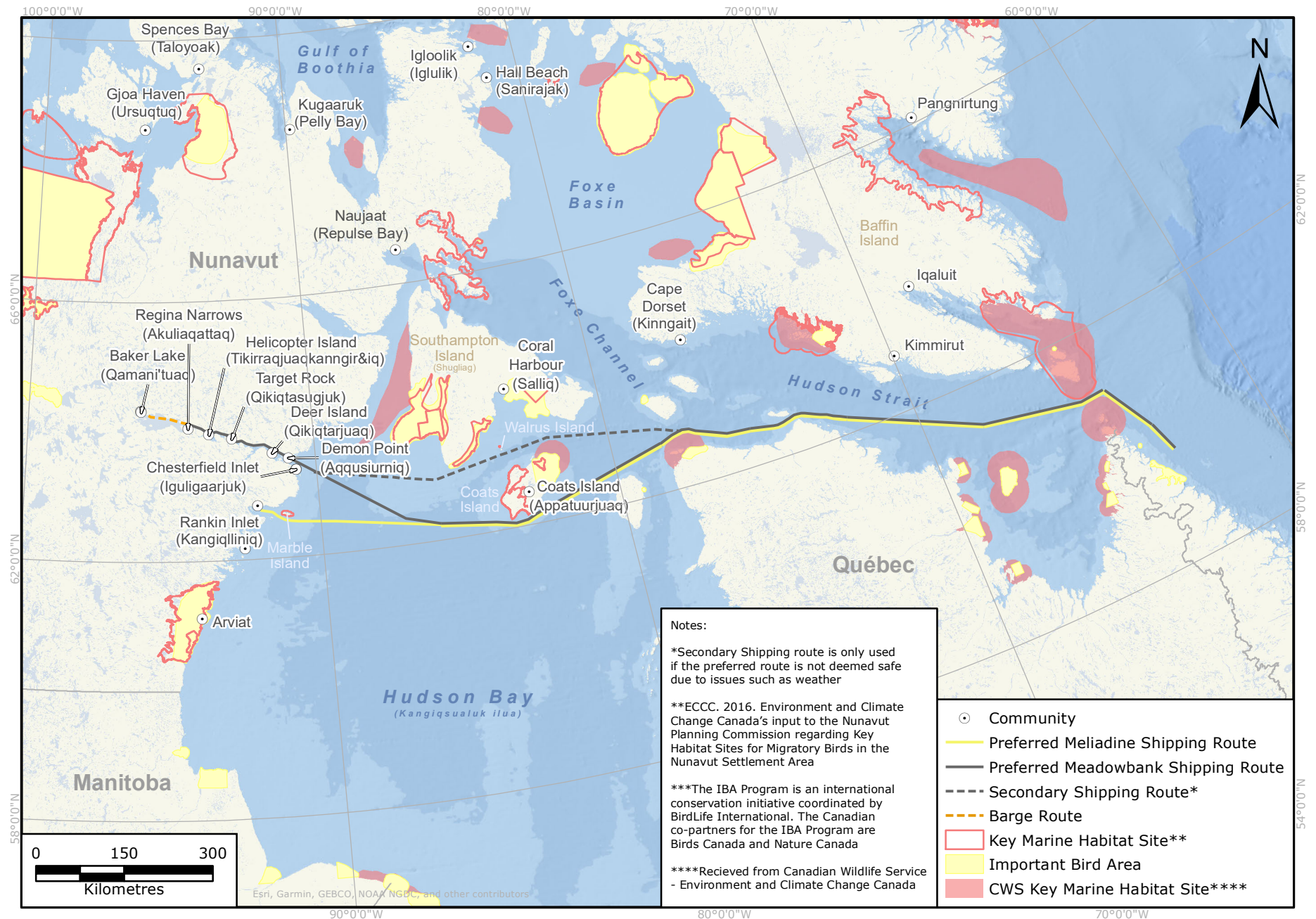
Agnico Eagle – Meadowbank Complex operates the Meadowbank and Whale Tail Mines (Figure 1.1-1). The Meadowbank Complex holds NIRB Project Certificates 004 and 008.

Shipping is carried out during the open water season (typically from July to late October) and follows recommended shipping routes that are presently in use for the annual sea lift to Chesterfield Inlet, Baker Lake, and other communities. The shipping route extends through Hudson Strait and across Hudson Bay to Chesterfield Inlet (Figure 1.1-2). There, dry cargo is lightered onto tug-assisted barges and fuel is lightered onto smaller shuttle tankers for Groupe Desgagnés and/or Woodward through the Baker Lake access passage (Chesterfield narrows, south channel) to the Meadowbank Mine barge unloading facilities and laydown area in Baker Lake.

FIGURE 1.1-1 MELIADINE AND MEADOWBANK MINE LOCATIONS



**FIGURE 1.1-2 MARINE MAMMAL AND SEABIRD OBSERVER PROGRAM STUDY AREA ALONG SHIPPING ROUTE TO MELIADINE AND MEADOWBANK MINES**





In addition, the Meadowbank Complex is required to place a local area marine wildlife monitor on-board all vessels transporting fuel or materials for the Project through Chesterfield Inlet to satisfy the NIRB Project Certificate No. 004, Term and Condition 36.

Whale Tail Mine Certificate No. 008, Term and Condition 39 requires that project vessels must follow a setback distance of 500 m from colonies and aggregation of seabirds and marine mammals while transiting through the Hudson Strait, Hudson Bay, and Chesterfield Inlet. To support compliance with this condition, setback polygons were created (Figure 1.1-2).

### 1.1.2 AGNICO EAGLE MELIADINE DIVISION

Agnico Eagle – Meliadine Division operates the Meliadine Mine (Figure 1.1-1). The Meliadine Project holds the NIRB Project Certificate 006.

Shipping is carried out during the open water season (typically from July to late October) and follows the recommended shipping routes presently in use for the annual sea lift to Rankin Inlet and other Kivalliq communities. The shipping route study area extends through Hudson Strait and across Hudson Bay to Rankin Inlet, with vessels anchoring either outside or inside Melvin Bay (Figure 1.1-2).

### 1.1.3 MMSO ANNUAL REPORT OVERVIEW

This MMSO Annual Report provides an overview of:

- training, mitigation, and monitoring required on vessels (Section 1.3, 1.4, 1.5);
- the vessels that supplied Meadowbank Complex and Meliadine in 2023 (Section 3.1);
- mitigation measures conducted by these vessels, including setbacks from sensitive habitats, traveling south of Coats Island and avoiding marine mammals and seabirds observed at sea (Sections 3.1.1, 3.1.2, 3.1.3);
- marine mammal monitoring conducted from 2017 to 2023 (2017 was for Meliadine only; Section 3.2);
- seabird monitoring conducted from 2018 to 2023 (Section 3.3); and
- community surveys carried out from barges between Helicopter Island in Chesterfield Inlet and the Hamlet of Baker Lake from 2008 to 2023 (with the exception of 2020 and 2021, when these surveys were completed by Groupe Desgagnés and Woodward due to restrictions related to the Covid-19 pandemic; Section 3.4). The shipping companies continued to record sightings in 2022 and 2023 to supplement the community effort (Section 3.4.1).

## 1.2 MMSO PROGRAM OBJECTIVES

The Meadowbank and Meliadine Shipping Management Plans (SMPs) outline a MMSO program within the Meadowbank Complex Marine Mammal Management and Monitoring Plan (MMMMP; Agnico Eagle 2022c) and Meliadine Marine Environmental Management Plan (MEMP; Agnico Eagle 2022d) that is implemented by Agnico Eagle shipping contractors (Agnico Eagle 2022a, 2022b). Groupe Desgagnés and Woodward are required to implement a MMSO program during shipping activities in the marine Regional Study Area (RSA; Hudson Strait through Hudson Bay) and in Chesterfield Inlet.

The objectives of the MMSO program are to:

1. mitigate interactions between marine mammals and seabirds and Project vessels;
2. collect information on marine wildlife presence along the shipping route; and
3. engage local community members to record sightings of wildlife opportunistically while travelling through Chesterfield Inlet.

As the MMSO related Terms and Conditions are similar between Meadowbank and Meliadine, the MMSO program is presented in one consolidated report in 2023, as has been done since 2020. This report presents a summary of the MMSO data collected by Groupe Desgagnés and Woodward on-board their vessels during the 2023 MMSO program to provide information to support Agnico Eagle's 2023 Annual Reports to the NIRB. This report also includes a summary of all data collected between 2017 and 2023.

### 1.3 MMSO TRAINING

Training provided by Agnico Eagle for the assigned MMSOs was updated in 2020. Minor updates to the seabird datasheets were completed in 2021, 2022, and 2023, and the seabird SOP in 2023 following comments from Environment and Climate Change Canada (ECCC) to encourage MMSOs to improve data collection using five-minute survey intervals for seabird surveys (see survey methods in Section 2.3). In March, 2023, Agnico Eagle presented at a Desgagnes seminar to remind the crews of obligations related to the MMSO program (PC requirements, mitigation, etc.) and the importance of program for compliance. Training was also provided to vessel captains and crew, as well as holding monthly meetings with the shipping companies to provide additional recommendations and feedback on data collection. The enhanced training material included the following:

- A Marine Shipping Mitigation Summary Brochure (Appendix A), which is required to be reviewed by all captains and assigned MMSOs, and to be kept by captains onboard the vessel at all times for easy and quick reference. This is a 10-page document summarizing guidelines for operation of vessels (e.g., how to transit near animals, preferred routes), mitigation measures for captains based on Section 4.2 of the SMPs, as well as a summary of the monitoring program and survey techniques.
- A pre-trip training presentation/webinar was created and recorded in 2020 and was required to be reviewed by vessel crew members in 2023. The recorded webinar is also available on the ship for review by MMSOs as needed.
- All MMSOs and captains are required to review and become proficient with the material provided in the Marine Mammal Monitoring SOP (Appendix B) and the Seabird Monitoring SOP (Appendix C), which details the methods for conducting both types of surveys.
- Crew are required to learn marine mammal and seabird identification, including common species (identification guides have been provided and updated posters were provided in 2023).
- All MMSOs and captains are required to review how to fill out the *Marine Mammal Sightings Form*, *Seabird Sightings Form*, *Incidental Marine Wildlife Sightings Form*, and the *Marine Mammal and Seabird Observer (MMSO) Incident Report Form* (Attachments in Appendices B and C).
- A one-page fact sheet for marine mammal surveys and a one-page fact sheet for seabird surveys were created in 2022 and provided to the shipping companies again in 2023 to emphasize survey methodologies for the MMSOs.

In addition, the Marine Mammal Sightings Form, Seabird Sightings Form, Incidental Marine Wildlife Sightings Form, and the Marine Mammal and Seabird Observer (MMSO) Incident Report Form have continually been updated between 2020 and 2023 to improve data collection and simplify the process for the MMSOs onboard the vessels. These data sheets are provided as attachments within Appendices B and C.

## 1.4 MARINE MAMMAL AND SEABIRD MITIGATION

Project Certificates 004, 006, and 008 require vessels supplying the Meadowbank Complex and Meliadine mines to avoid sensitive marine mammal and seabird habitats such as haul-outs and breeding colonies. Mitigation and management measures (summarized from Section 4.2 of the Shipping Management Plans for Meadowbank and Meliadine; Agnico Eagle 2022a, 2022b) include the following:

1. General navigational requirements while travelling through Hudson Strait to Helicopter Island or Rankin Inlet, include the following:
  - ships will, when possible, maintain a straight course and constant speed, and avoid erratic behaviour;
  - marine mammals will be given right of way as safe navigation allows;
  - the ship will not be operated in such a way as to separate an individual member(s) of a group of marine mammals from other members of the group;
  - ships will maintain the required setback distances (500 m) around marine mammals and seabirds on land;
  - ships will use a routing south of Coats Island as the primary shipping route;
  - ships travelling for the Meliadine mine will remain at least 2 km from Marble Island to avoid disturbing seals, walrus and marine birds that might be in the vicinity; and
  - ships will maintain the required setback distances around marine mammals and seabirds in the water (between 100 m and 500 m depending on group size or behaviour of animals, see Appendix A).
2. As part of the shipping companies' standard operating procedures, ship crews will monitor for marine mammals and seabirds from Hudson Strait to the lightering point near Helicopter Island (Meadowbank) or Rankin Inlet (Meliadine).
3. The ship's Master will be notified if there is a concern of the ship striking a marine mammal.
4. Ship personnel are required to take actions to avoid a possible collision by implementing management measures (e.g., reduce speed, stop vessel until animal moves away), if safe to do so.
5. If a collision occurs, the appropriate people will be contacted and the incident will be documented.

This report describes the vessel routes, and their avoidance of sensitive wildlife areas. The report also describes any observations of marine mammals and seabirds that would trigger mitigation and the mitigation that occurred, if any.

## 1.5 MMSO PROGRAM MONITORING ON VESSELS

The MMSO Program was developed to meet commitments made during the NIRB hearings related to marine shipping. The MMSO program is required to be conducted during all routine shipping activities along the shipping route from Hudson Strait to the project. The program includes collection of information on marine wildlife species presence along the shipping route. In addition, surveys are occasionally conducted while the vessel is anchored at Helicopter Island or Rankin Inlet. The marine mammal and seabird monitoring is conducted by ship's crew and methods are provided in Section 2 and Appendices B and C. Results of MMSO monitoring at sea are reported in Sections 3.2 and 3.3.

## 1.6 MARINE WILDLIFE OBSERVATIONS – BAKER LAKE

When transporting dry cargo and fuel from Bécancour to Baker Lake, deep-water vessels can enter Chesterfield Inlet, but must stop at Helicopter Island (Tikirraqjuaqkanngir&iq) at the west end of the Inlet. There, material is loaded aboard barges, and tugs move the barges through the narrow passage connecting Chesterfield Inlet to Baker Lake, and then on to the hamlet of Baker Lake.

To satisfy NIRB Project Certificate No. 004, Term and Condition 36, Agnico Eagle's Meadowbank Complex is required to engage a local area marine wildlife monitor onboard all vessels transporting fuel or dry cargo for the mine on barge shipping between Helicopter Island and Baker Lake. Local area marine wildlife observers record all observations of wildlife as incidental sightings. Note that in 2020 and in 2021, community members were not permitted to board vessels due to health and safety restrictions in place related to the Covid-19 pandemic. Therefore, Groupe Desgagnés and Woodward had their MMSOs record sightings of marine mammals and seabirds when possible while travelling on the barge. Results of marine wildlife monitoring between Helicopter Island and Baker Lake are reported in Section 3.4. In addition to local monitors, both Groupe Desgagnés and Woodward MMSOs continued to complete marine wildlife observations in 2022 and 2023 between Helicopter Island and Baker Lake. These results are presented in Sections 3.2 and 3.3 and summarized in Section 3.4.1.

## 2. METHODS

Groupe Desgagnés and Woodward crew members were assigned MMSO duties and were trained to complete the surveys following the SOPs (Appendices B and C) and in accordance with the methods outlined in the SMPs (Agnico Eagle 2022a, 2022b). These methods are summarized below and described in detail in Appendices B and C.

### 2.1 VESSEL TRACKS

Agnico Eagle provided ERM with a list of vessel names and dates of delivery for shipments to Meadowbank and Meliadine. 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 (VTS) 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 is 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 Agnico Eagle were downloaded from Vesseltracker (2023) and plotted using ArcGIS 10.8.1. Only vessels traveling to Meadowbank or Meliadine are presented in this report. In addition, important bird areas and marine mammal aggregations were buffered by 500 m, and Marble Island was buffered by 2 km, as defined by the SMPs (Agnico Eagle 2022a, 2022b), to establish setback polygons. A Geographic Information System (GIS) was used to perform an overlay and near analysis to identify which lines and points intersected or were in close proximity to these buffered areas.

### 2.2 MARINE MAMMALS

MMSO observations were completed while the vessels were traveling to Agnico Eagle mines. Surveys are carried out by the dedicated MMSO from a high location on the vessel, either on the bow or in the wheelhouse, depending on weather. One to three surveys are completed daily from the same location on the vessel each time. Marine mammal surveys last for a minimum of 1.5 hours to not more than two hours to mitigate observer fatigue and eyestrain. A precise scan routine is carried out throughout the marine mammal observation period as described in the MMMMP and the Marine Mammal Survey SOP (Agnico Eagle 2022c, 2022d; Appendix B).

All marine mammals observed during the dedicated marine mammal survey periods are recorded on the *Marine Mammal Sightings Form* (Appendix B), including GPS location, distance to animal, angle to animal, number of individuals, species, and behaviour. If a marine mammal is observed during the voyage outside of the dedicated marine mammal observation period (i.e., off-effort), this is recorded as an incidental sighting on the *Incidental Marine Wildlife Sightings Form* (Appendix B).

Further details regarding survey methods for marine mammals are provided in the SOP provided in Appendix B, and within the MMMMP (Agnico Eagle 2022c, 2022d).

## 2.2.1 MARINE MAMMAL DATA ANALYSIS

This section outlines the methods used to summarize the environmental conditions, observer effort, and marine mammal sightings related to the information recorded by Groupe Desgagnés and Woodward. There were not enough marine mammal sightings recorded during the MMSO programs to conduct a density analysis. However, after an additional shipping season and due to the improvement in data collection in recent years, the possibility for a density analysis will be revisited annually.

### 2.2.1.1 TEMPORAL AND SPATIAL OBSERVATION EFFORT

Temporal (hours) and spatial (km) marine mammal observation effort was defined as the effort dedicated to marine mammal surveys as recorded by Groupe Desgagnés and Woodward on the MMSO datasheets. Marine mammal spatial effort was calculated as linear kilometres using GPS coordinates that were recorded at the start and end of each MMSO survey transect. Start and end times were recorded on the datasheets and were used to determine temporal effort (i.e., the time spent completing marine mammal surveys). If a start or end location, or a start or end time was not entered in the datasheet, then spatial and/or temporal effort could not be calculated for that survey and was excluded from the survey effort.

### 2.2.1.2 ENVIRONMENTAL VARIABLES

Environmental variables were recorded on the datasheets during surveys. These variables include wind speed and direction, sea state (Beaufort scale), weather (e.g., precipitation and cloud conditions), visibility (in km), and sun glare. Environmental variables were summarized as a percentage of observation effort.

## 2.3 SEABIRDS

Dedicated MMSOs are directed to complete surveys from moving and stationary platforms according to the Eastern Canada Seabirds at Sea (ECSAS) standardized protocol for pelagic surveys from moving and stationary platforms (Gjerdrum et al. 2012). Surveys for seabirds were conducted by the dedicated MMSO from a high location on the vessel, either on the bridge or in the wheelhouse, depending on weather. Surveys are carried out at the same location on the vessel as much as possible. Surveys are best completed along a transect line; therefore, it is best to start a seabird observation period when the vessel is and will be moving in a straight line for an extended period of time (i.e., Moving Vessel Surveys, Appendix C Section 2.4.3). If the vessel is stationary (e.g., anchored) for a day or portion of a day, then a seabird survey will be required while anchored to ensure the minimum of one survey per day is met (i.e., Stationary Vessel Survey, Appendix C Section 2.4.4). Training for crew members focused on following the ECSAS protocol, which involves surveys conducted in 5-minute snapshot intervals, as per recommendations by ECCC.

For both survey types (moving and stationary), binoculars or spotting scopes are used to confirm species identification and other details when necessary. All seabirds observed during surveys are recorded including species, number of individuals, location (in flight or on water), distance to the vessel, and behaviour. Additional information regarding the seabird surveys can be found in Appendix C.

MMSOs are directed to complete each seabird survey period on a moving vessel during six consecutive five-minute periods and repeated three times a day to capture morning, afternoon and evening periods, when possible. A precise scan routine is conducted within 300 m from the vessel as described in the MMMMP and the Seabird Survey SOP (Agnico Eagle 2022c, 2022d; Appendix C). All birds observed within this 300 m transect, whether flying or on the water, are recorded and considered in-transect sightings.

Stationary vessel surveys are carried out as a 180° semi-circle scan of the surrounding area from the front (bow) of the vessel. Birds within 300 m are considered inside the survey area; however, birds beyond 300 m are still recorded. The survey ends when all seabirds within the semi-circle have been recorded, or if no seabirds are seen during the initial scan, the survey is complete.

If a seabird is observed during the voyage outside of the dedicated seabird observation period (i.e., off-effort), this is recorded as an incidental sighting on the *Incidental Marine Wildlife Sightings Form* (Appendix B).

## 2.3.1 SEABIRD DATA ANALYSIS

### 2.3.1.1 TEMPORAL AND SPATIAL OBSERVATION EFFORT

The number of survey hours and kilometres (km) were recorded as indices of effort for seabird surveys. Seabird spatial effort was calculated as linear kilometres using GPS coordinates that were recorded by Groupe Desgagnés and Woodward at the start and end of each survey interval. Start and end times recorded on datasheets were used to determine temporal effort (i.e., the time spent completing seabird surveys). Spatial effort is reported for moving vessel surveys only, while temporal effort is reported for both moving vessel and stationary vessel surveys.

Starting in 2022, crew member training focused on emphasizing five-minute interval surveys, as per the Eastern Canada Seabirds at Sea (ECSAS) standardized protocol for pelagic surveys from moving and stationary platforms (Gjerdrum et al. 2012). Shipping companies recorded start/end time and position for each five-minute interval of a survey (for moving vessel surveys). Each survey consisted of six five-minute intervals. Survey effort was summarized by incorporating all six intervals. However, each five-minute interval was considered separately for distance models because the precise start and end locations are required for modelling.

### 2.3.1.2 ENVIRONMENTAL VARIABLES

Environmental conditions were recorded on survey datasheets: wind speed (Beaufort scale) and direction, sea state, weather (e.g., precipitation and cloud conditions), visibility, and sun glare. Environmental variables were summarized according to the number of seabird detections so that any trends with poorer weather or visibility conditions could be visually assessed.

### 2.3.1.3 DATA ANALYSIS

Distance analyses estimate the diminishing detectability of objects (e.g., birds) with greater distance from observers. For example, a bird flying within 50 m is more likely to be seen and identified than a bird flying 300 m away from an observer. Because birds at greater distances are more likely to be missed during surveys, the number of birds recorded does not represent the

true abundance of birds in the area. Distance models take these detectability changes into account and allow more accurate estimation of seabird density (Buckland et al. 2001). Seabird monitoring records included observations of seabirds at varying distances from the vessel. Data from a moving vessel can be approximated as sampling along line transects. This analysis is also possible for point data (i.e., stationary vessel surveys), but estimates of seabird density require repeated observations at the same point locations. Therefore, the analysis of the stationary vessel surveys only includes detection estimates, but not density estimates.

#### 2.3.1.4 MOVING VESSEL SURVEYS – DATA ANALYSIS

Density of seabirds was estimated via distance modelling of moving vessel surveys, with comparison of results between years of surveying. Distance model selection did not include environmental variables, due to low sample size limiting modelling fitting capabilities (Buckland et al. 2001); visual assessment of variation in detection rate according to environmental variables was conducted to determine if any major anomalies were present with poor weather such as rain, snow, or fog.

Analysis of seabird data was performed using the Distance software adapted for R (Distance package v 1.0.7, run on R v 4.1.1; Miller et al. 2019, R Core Team 2021). First, model key functions are fit to the data to determine the general shape of the model curve, which describes the change in detection with distance. The three main key functions are: hazard rate, half-normal, and uniform. For example, a uniform function indicates that detection drops off consistently with distance (e.g., a bird is less likely to be seen at 50 m than 0 m, and less likely still to be seen at 100 m). Hazard rate and half-normal curves maintain consistent detection for a certain distance, but detection drops off more steeply at farther distances (e.g., a bird is just as likely to be detected if it is within 100 m but much less likely to be detected past 150 m; Miller et al. 2019). These key functions can have adjustment terms which refine the main model fit: cosine, simple polynomial, and hermite polynomial (a type of orthogonal polynomial) adjustments. All model key function and adjustment combinations were tested for fitting the data.

The observation data were binned into distance categories for analysis: 0-50 m, 50 to 100 m, 100 to 200 m, and 200 to 300 m. The closest distance bins were considered for grouping in case of evasive movements causing an abnormal detection distribution (e.g., if there are more sightings > 50 m away because birds dive or fly away as the ship approaches), but there did not appear to be any anomalies in the data requiring the distance bins to be grouped differently. Models accounted for variable detection according to group size; density estimates results are presented as individuals per km<sup>2</sup>. Analyses included only on-transect sightings and did not use re-sightings of the same birds.

Models were selected using the minimum Akaike's Information Criterion (AIC; Akaike 1973). AIC values provide relative rankings between models fit with the same data, where the lowest AIC ranked model is considered the best fit to the data. Top models were also checked for adequate goodness of fit indices including plotting model curves against the data.



## 2.4 MARINE WILDLIFE OBSERVATIONS – BAKER LAKE

When transporting equipment and fuel from Bécancour to Baker Lake, deep-water vessels can enter Chesterfield Inlet, but must stop at Helicopter Island (Tikirraqjuaqkanngir&iq) at the west end of the Inlet. There, material is loaded aboard barges, and tugs move the barges through the narrow passage connecting Chesterfield Inlet to Baker Lake, and then on to the hamlet of Baker Lake.

To satisfy NIRB Project Certificate No. 004, Term and Condition 36, Agnico Eagle's Meadowbank Complex is required to engage a local area marine wildlife monitor onboard all vessels transporting fuel or materials for the Mine on barge shipping between Helicopter Island and Baker Lake. Local area marine wildlife observers record all observations of wildlife as incidental sightings. Note that in 2020 and in 2021, community members were not permitted to board vessels due to health and safety restrictions in place related to the Covid-19 pandemic. Therefore, during those years, Groupe Desgagnés and Woodward had their MMSOs record sightings of marine mammals and seabirds when possible while travelling on the barge, following methods described in Section 2.2 and 2.3. Local monitors and Groupe Desgagnés and Woodward MMSOs completed the marine wildlife surveys in 2023, with results from the vessel companies presented in Sections 3.2 and 3.3 and summarized in Section 3.4.1.

## 3. RESULTS

### 3.1 SHIPPING ACTIVITY IN 2023

During the 2023 shipping season, a total of 23 vessels, (two of which were tugs, 13 cargo, and eight fuel) travelled to Meadowbank (nine vessels), Meliadine (six vessels), or to both Meadowbank and Meliadine (eight vessels) between July 1 and October 31, 2023 (Table 3.1-1; Figures 3.1-1 through 3.1-4). Vessel tracks broadcast using Automated Information System (AIS) vessel positioning were downloaded from Vesseltracker (2023) and plotted using ArcGIS 10.8.1.

**TABLE 3.1-1 SUMMARY OF GROUPE DESGAGNÉS AND WOODWARD VESSELS DURING THE SHIPPING SEASON, JULY TO OCTOBER 2023**

Vessel Name	Fuel or Cargo	Project and Number of Trips			Total Trips
		Meadowbank	Meliadine	Meadowbank and Meliadine	
Kivalliq W	Fuel	1	-	1	2
Kitikmeot W	Fuel	-	1	-	1
Tuvaq W <sup>1</sup>	Fuel	2	-	-	2
Marlin Hestia	Fuel	1	-	1	2
Marlin Amber	Fuel	-	-	1	1
Nordika Desgagnés	Cargo	1	2	1	4
Atlantic Elm Tug <sup>2</sup>	Cargo	1	-	-	1
Atlantic Beech Tug <sup>2</sup>	Cargo	1	-	-	1
Marcelline A.	Cargo	1	1	2	4
Andesborg	Cargo	-	1	-	1
Miena Desgagnés	Cargo	1	1	2	4
<b>Total</b>		<b>9</b>	<b>6</b>	<b>8</b>	<b>23</b>

<sup>1</sup> The Tuvaq W. was also transiting between Helicopter Island and Baker Lake for the Meadowbank mine between July 19 and August 26, and between October 9 and October 19; however, this is not included as separate trips due to the nature of the vessel transiting only locally.

<sup>2</sup> The Atlantic Elm and Atlantic Beech Tugs were also transiting between Helicopter Island and Baker Lake for the Meadowbank mine between July and October; however, these are not all considered separate trips due to the nature of the tug transiting only locally.

Most (74%) of these vessels delivered cargo and fuel exclusively for Agnico Eagle, while six trips also conducted community re-supply before visiting Agnico Eagle mines, including the following:

- Four vessels in July (Kivalliq W., Kitikmeot W., Tuvaq W. and Nordika Desgagnés.; Figure 3.1-1).
- Two vessels in October (Tuvaq W. and Kivalliq W; Figure 3.1-4).

FIGURE 3.1-1 GROUPE DESGAGNÉS AND WOODWARD SHIPPING TRACKS, JUNE AND JULY 2023

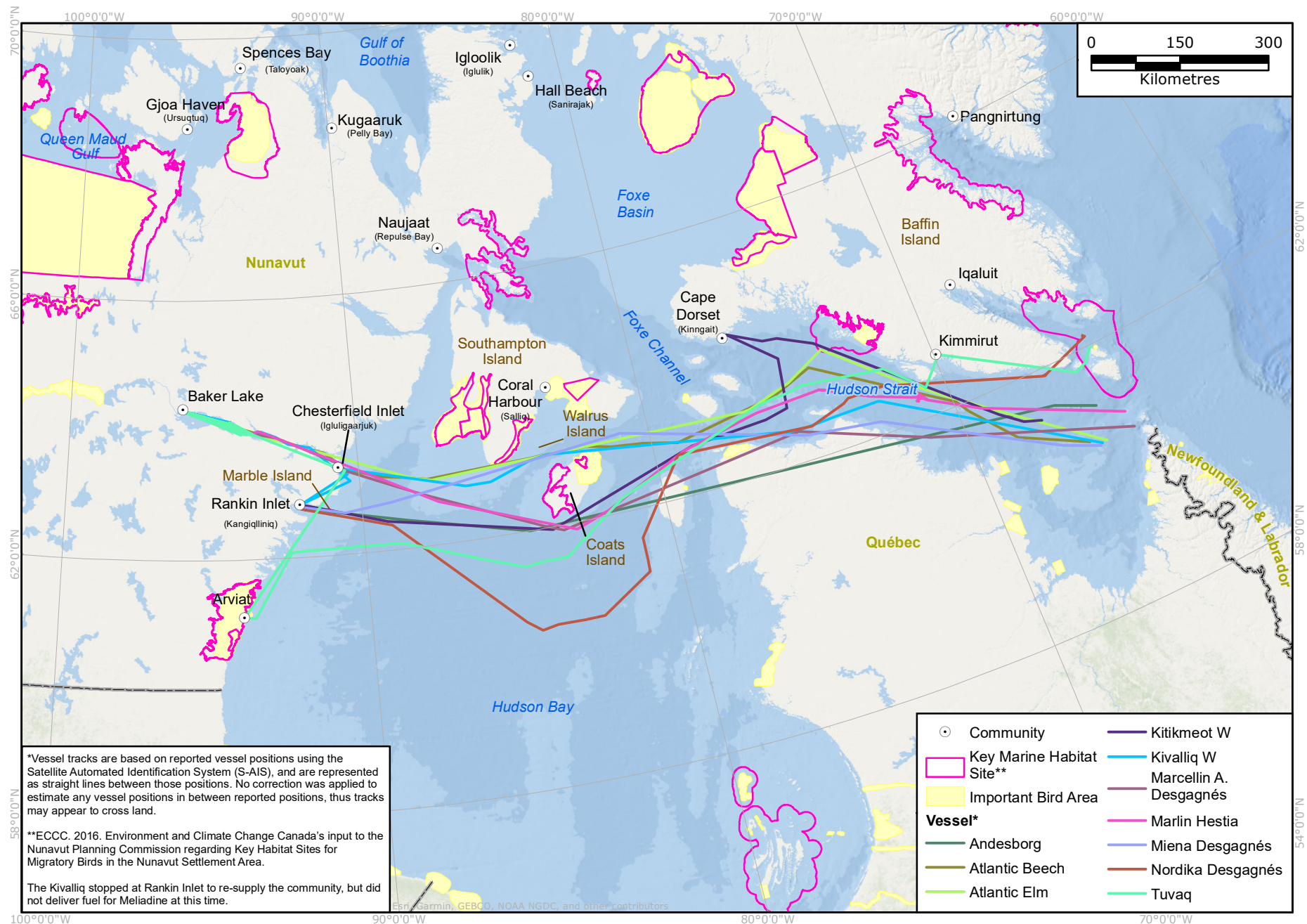
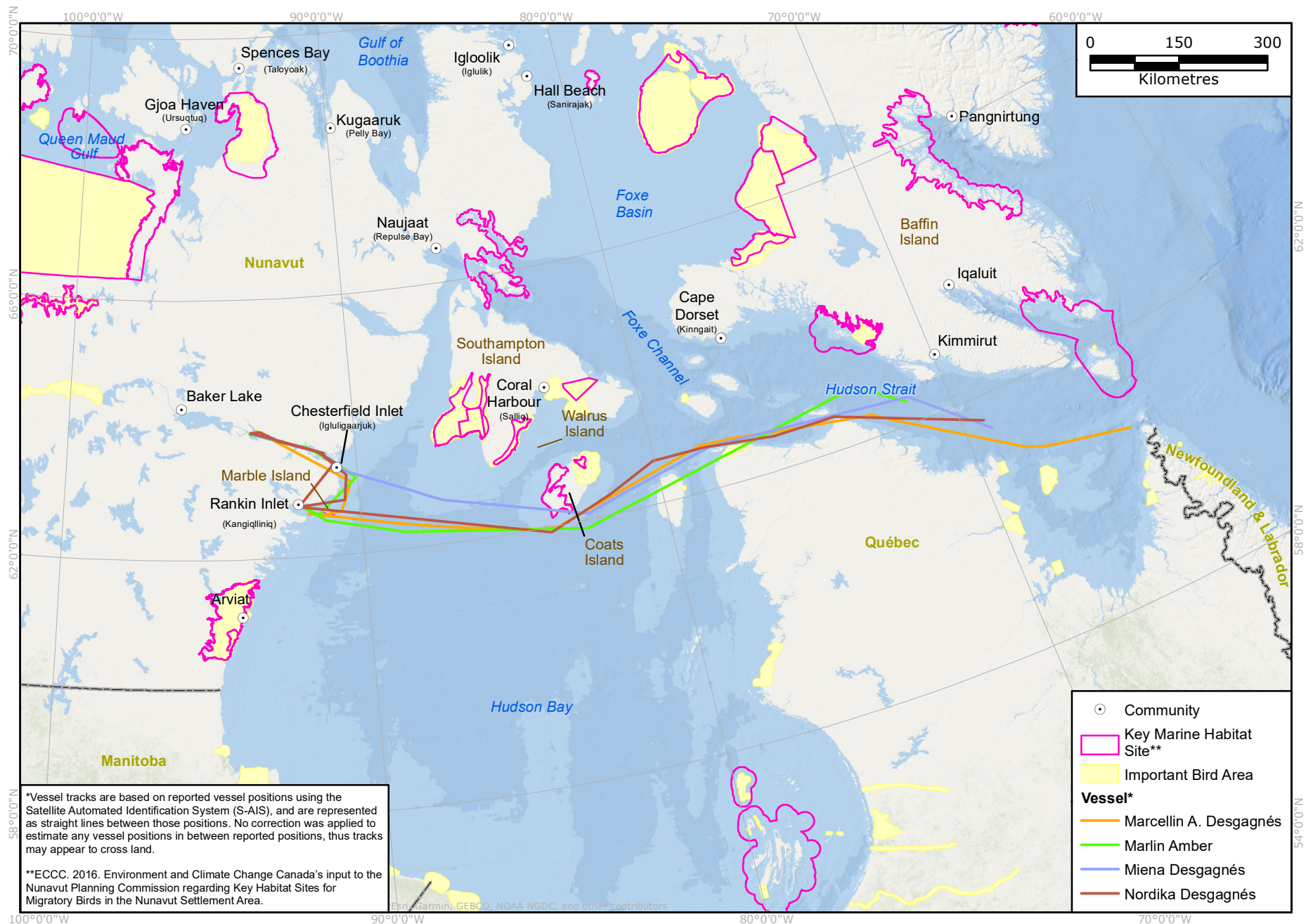


FIGURE 3.1-2 GROUPE DESGAGNÉS AND WOODWARD SHIPPING TRACKS, AUGUST 2023



\*Vessel tracks are based on reported vessel positions using the Satellite Automated Identification System (S-AIS), and are represented as straight lines between those positions. No correction was applied to estimate any vessel positions in between reported positions, thus tracks may appear to cross land.

\*\*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.

Esri, Garmin, GEBCO, NOAA NGDC, and other contributors



CLIENT: AGNICO EAGLE MINES LIMITED  
GIS NUMBER: AEG-23-034b

DATE: 01/24/2024

PROJECTION: Canada Lambert Conformal Conic  
SCALE: 1:9,000,000 when printed at 8.5x11

FIGURE 3.1-3 GROUPE DESGAGNÉS AND WOODWARD SHIPPING TRACKS, SEPTEMBER 2023

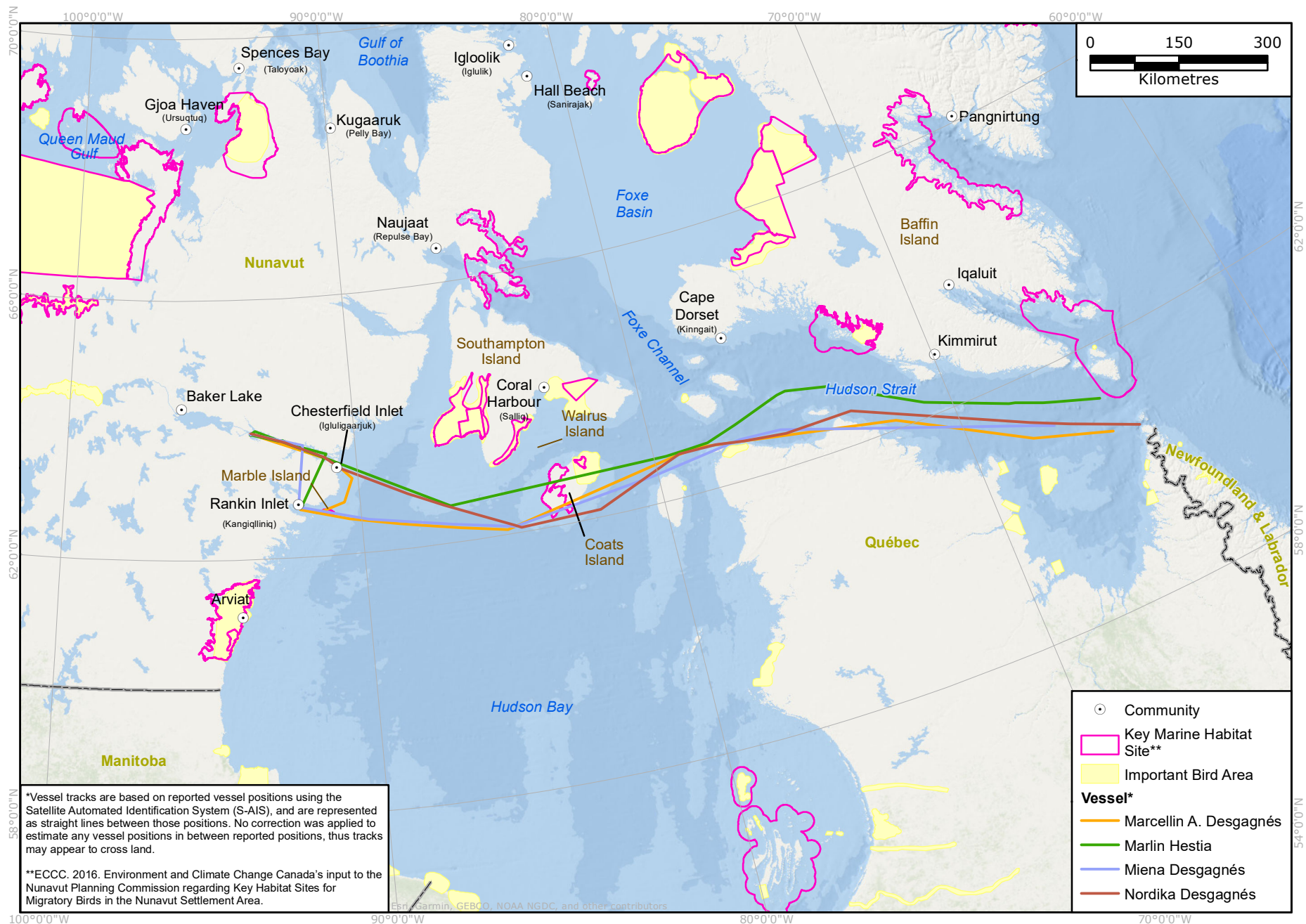
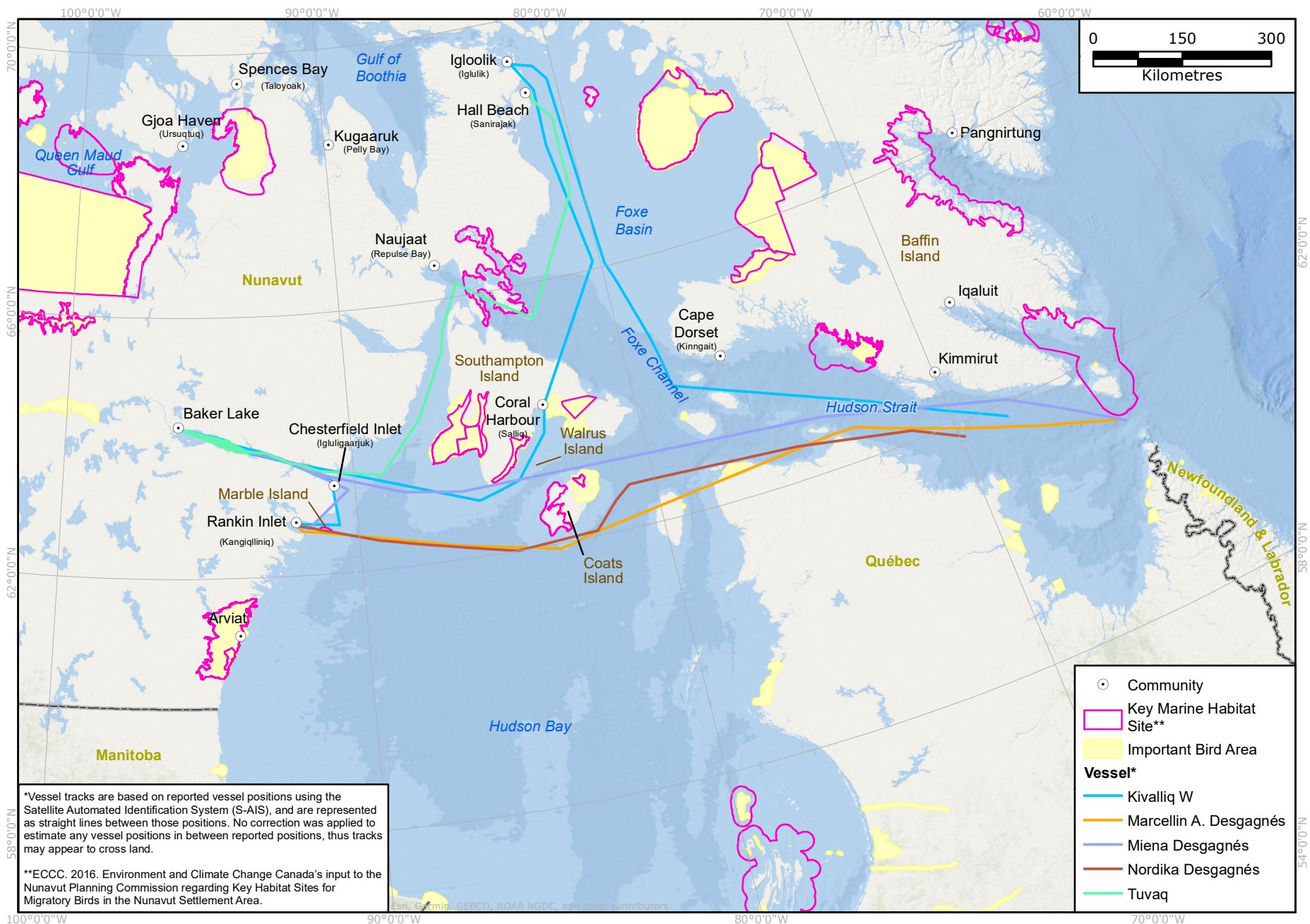


FIGURE 3.1-4 GROUPE DESGAGNÉS AND WOODWARD SHIPPING TRACKS, OCTOBER 2023



\*Vessel tracks are based on reported vessel positions using the Satellite Automated Identification System (S-AIS), and are represented as straight lines between those positions. No correction was applied to estimate any vessel positions in between reported positions, thus tracks may appear to cross land.

\*\*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.



CLIENT: AGNICO EAGLE MINES LIMITED  
GIS NUMBER: AEG-23-034d

DATE: 01/24/2024

PROJECTION: Canada Lambert Conformal Conic  
SCALE: 1:9,000,000 when printed at 8.5x11

### 3.1.1 MITIGATION MEASURES – SETBACKS FROM SENSITIVE HABITATS

All vessels are required to follow a setback distance of 500 m from colonies and aggregation of seabirds and marine mammals while transiting through the Hudson Strait, Hudson Bay, and Chesterfield Inlet, and a setback distance of 2 km from Marble Island, as defined by the SMPs (Agnico Eagle 2022a, 2022b). Maps were produced that included these locations, buffers, and the vessel tracks.

Where AIS data was recorded frequently (every hour), vessel tracks avoided the setback areas. However, in some cases, the AIS data was recorded less frequently (every 6 to 12 hours). These long delays between position fixes create erroneous vessel tracks, with vessels in some cases appearing to cross dry land and in other cases appearing to cross the setback areas. For example, during a vessel trip by the Marlin Hestia in September (Figure 3.1-3), no positions were recorded over two days between September 16 and September 18; therefore, the vessel track appears as a straight line going directly across Coats Island, while in fact the vessel traveled south of Coats Island. In October, the Kivalliq W. appears to cross over Southampton Island (Figure 3.1-4), as no positions were recorded over 24 hours, and the vessel made a stop in the community of Coral Harbour. Due to the poor resolution of these data, information (e.g., route, setbacks) regarding these trips cannot be extrapolated with confidence. Agnico Eagle will continue to investigate alternative commercial AIS suppliers in 2024; however, Vesseltracker remains the most reliable at this time.

Track data is based on satellite positioning; therefore, ship track intersections likely occurred due to lack of ship track resolution and the intersection of existing points to create a continuous shipping track. Groupe Desgagnés and/or Woodward vessel tracks appeared to potentially cross through the 2 km setback polygon at Marble Island on 10 occasions, and at the Coats Island setback polygon on two occasions (Figures 3.1-1 through 3.1-4). However, when examining the data, it appears that a vessel only entered the 2 km Marble Island buffer on two occasions, described below.

In all cases where track lines appeared to intersect the setbacks, the point locations were investigated further. From these 10 tracks, only two location points received from the satellite AIS were located within the setback polygons: on one occasion in August, the Marcellin A Desgagnés appeared to be within the 2 km setback buffer around Marble Island (1.2 km from Marble Island), and on another occasion in October, when the same vessel was 1.85 km from Marble Island. No other points were recorded within the Marble Island setback. The closest ship track point to the Coats Island setback was recorded by the Atlantic Beech in July, 8.3 km from the setback polygon. Therefore, it is unlikely that the ship passed directly through the setbacks and that the intersections are due to lack of ship track resolution. Vessel captains will be reminded of the importance of maintaining a 2 km buffer around Marble Island prior to the start of the 2024 shipping season.

### 3.1.2 MITIGATION MEASURES – COATS ISLAND

The corridor between Southampton and Coats Islands has been identified by the community of Coral Harbour as an important breeding ground for walrus and marine birds, and as a potential migration route for marine mammals. Due to concerns that vessel traffic between Coats Island, Walrus Island (north of Coats Island) and Southampton Island may disturb these animals, vessels are required to transit south of Coats Island whenever the weather is safe to do so.

Of the 23 vessels servicing the Meadowbank and Meliadine mines in 2023, the majority (78%, 18 trips) travelled south of Coats Island. Vessels travelled north of Coats Island on the following five occasions (Figures 3.1-2 and 3.1-4):

1. On June 30 the Miena Desgagnés was required to use the north passage due to unsafe conditions along the shipping route in Hudson Bay.
2. On July 4, the Kivalliq W. travelled north due to conditions along the shipping route to the south of Coats Island.
3. On July 13, the Atlantic Beech travelled north of Coats Island to avoid unsafe sea conditions south of the Island.
4. On July 14, the Atlantic Elm was required to use the north passage due to unsafe conditions along the shipping route south of Coats Island.
5. On October 4, the Miena Desgagnés was required to use the north passage due to high winds and unsafe sea conditions.

The Kivalliq W. vessel track in October also travelled between the two islands; however, it was required to stop in Coral Harbour on the way to the mine sites.

### 3.1.3 MITIGATION MEASURES – AVOIDANCE OF MARINE MAMMALS AND SEABIRDS

Ships are required to follow mitigation measures outlined in Section 4.2 of the SMPs (Agnico Eagle 2022a, 2022b), summarized in Section 1.4 and Appendix A. In 2023, none of the marine mammal or seabird sightings triggered mitigation measures, such as slowing the vessel or changing course. No incidents with marine mammals or seabirds were reported for the 2023 shipping season.

## 3.2 MARINE MAMMAL OBSERVATIONS

### 3.2.1 SURVEY EFFORT

Surveys were conducted in 2023 by dedicated crew MMSOs between Hudson Strait and Rankin Inlet/Helicopter Island between July 3 and November 1 on board various Groupe Desgagnés and Woodward vessels. A total of 172 marine mammal surveys were conducted in 2023. However, of the 172 surveys, 46 (10 moving vessel surveys and 36 stationary surveys) were excluded from the analysis of survey effort due to missing start and/or end times, or missing start and/or end latitudes or longitudes. Therefore, a total of 126 marine mammal surveys (64 while the vessel was moving, and another 62 surveys while the vessel was stationary) were completed in 2023.

The 64 transects surveyed while the vessel was moving included a total spatial effort of 1,996.4 km of marine mammal transects over 79.7 hours (Figure 3.2-1; Table 3.2-1). An additional 72.3 hours of surveying was completed while the vessel was anchored. Of the 62 stationary surveys completed while the vessel was anchored, the majority were conducted in Chesterfield Inlet near Helicopter Island and in Rankin Inlet (Figure 3.2-1). Appendix D summarizes all marine mammal surveys and sightings information.



FIGURE 3.2-1 MARINE MAMMAL SURVEY TRANSECTS AND STATIONARY SURVEY LOCATIONS, JULY TO OCTOBER, 2023

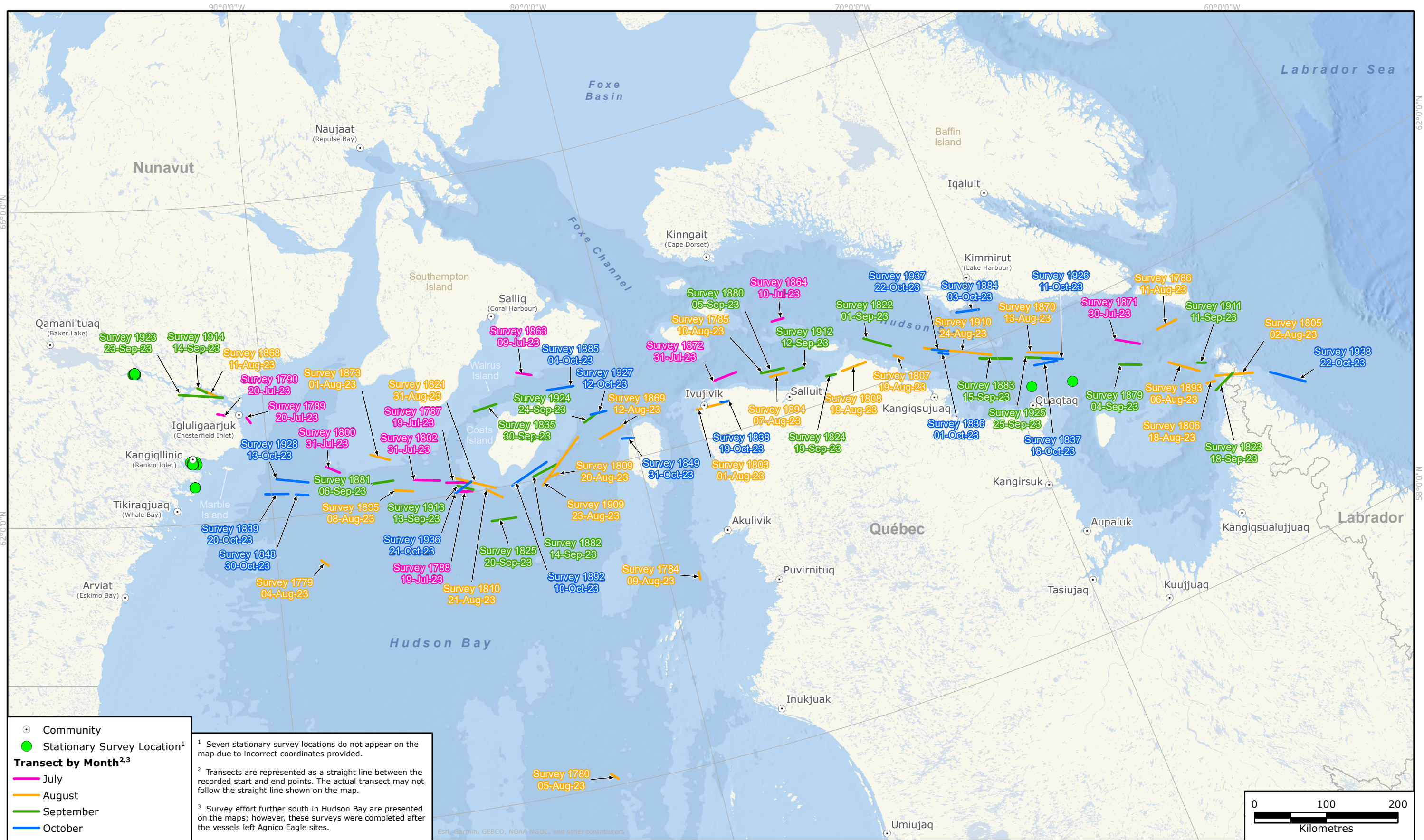


TABLE 3.2-1 MARINE MAMMAL SURVEY EFFORT, 2017 TO 2023

Year of Survey	Moving Surveys			Stationary Surveys
	Number of Transects Surveyed	Total km Surveyed (Spatial Effort)	Total Time (hr) Surveyed (Temporal Effort)	Total Time (hr) Anchored Vessel
2017	11	NA <sup>1</sup>	10.3	0.00
2018	31	1,155.7	29	0.00
2019	38	1,898.3	62.8	59.3
2020	58	2,354.7	112.3	92.5
2021	56	2,824.9	110.5	80.4
2022	92	2,765.8	109.3	56.6
2023 <sup>2</sup>	64	1,996.4	79.7	72.4
<b>Total</b>	<b>350</b>	<b>12,995.8</b>	<b>513.9</b>	<b>361.1</b>

<sup>1</sup> Spatial data for the 2017 surveys are not available.

<sup>2</sup> A total of 172 surveys were completed in 2023 (74 moving, 95 stationary, and three unknown); however, due to incomplete survey effort being recorded (start or end positions or times missing), they are not included in the calculation of survey effort. Therefore, survey effort in 2023 was in fact greater, but due to data recording errors not all surveys are included in calculations of survey effort. In addition, fewer surveys were completed in 2023 due to fewer vessels travelling to Agnico Eagle in 2023 (23 vessels) compared to previous years (e.g., 27 vessels in 2022 and 29 vessels in 2021).

According to the observation datasheets completed by Groupe Desgagnés and Woodward, marine mammal observer effort in 2023 was similar to 2020, 2021, and 2022 (Table 3.2-1). In 2023, observer effort during transit was 79.7 hours and 1,996.4 km, and an additional 72.4 hours of effort while the vessel was anchored. Datasheets with missing survey times, dates and/or GPS coordinates were not incorporated into the effort analysis. In 2023, there were 10 transects while the vessel was moving that were missing either a start or end time, or the GPS coordinates for the start or end location of the transect, and 36 stationary surveys that were missing start or end times (i.e., no temporal effort). Sightings during these surveys are reported as incidental observations (see Table 3.2.3). The lower survey effort for moving transects during 2023 compared to 2020 through 2022 is attributed to these 10 additional transects with missing survey effort data, and to overall fewer vessels travelling to Agnico Eagle in 2023 (23 vessels compared to 27 in 2022 and 29 in 2021). Therefore, survey effort in 2023 was in fact greater, but due to data recording errors, not all surveys are included in calculations of survey effort.

### 3.2.1.1 ENVIRONMENTAL VARIABLES AND WEATHER CONDITIONS

The weather conditions (Figure 3.2-2a) for the 2023 marine mammal observation program were predominantly partly cloudy or clear (39% and 33% of the survey effort, respectively). Rain and fog were present for a combined 8% of the survey time, while snow was present for 1% of the survey effort. Average visibility extended to approximately 9 km, with a maximum estimate of 30 km and minimum of 100 m.

The sea state (Figure 3.2-2b) ranged from sea state 0 (calm) to sea state 6 (large waves with white foam crests); however, the sea state fell predominantly within states 0 (calm), 1 (ripples), and 2 (small wavelets all over; 15%, 40% and 26% of the survey effort, respectively). Large wavelets, few whitecaps (sea state 3) occurred 9% of the survey effort while sea state 4 (small waves, frequent whitecaps) occurred 3% of the survey effort. Sea state 5 (moderate waves, many whitecaps) and 6 (large waves and white foam crests) occurred rarely (1% and 1% of survey effort), and 5% of the survey effort lacked sea state data.

Glare conditions were generally favourable during surveys in 2023; however, 14% of the 2023 marine mammal surveys proceeded with bright glare (Figure 3.2-2c). Glare was recorded as none and slight/grey 65% and 17% of the time respectively, and glare data is absent for 4% of the survey effort.

### 3.2.2 MARINE MAMMAL OBSERVATIONS 2023

Marine mammals were observed during dedicated surveys and incidentally in 2023. Survey results, incidental sightings, and species descriptions are provided in the following sections.

#### 3.2.2.1 MARINE MAMMAL OBSERVATIONS DURING SURVEYS, 2023

During dedicated marine mammal surveys, there were five separate sightings of marine mammals (27 animals) by Groupe Desgagnés and Woodward during the MMSO Program in 2023 (Table 3.2-2; Figure 3.2-3). Species observed included harp seal (*Pagophilus groenlandicus*) and beluga whale (*Delphinapterus leucas*). In addition, there were two separate sightings of seals that were not identified to species, as well as one sighting of unknown whale species.

**TABLE 3.2-2 MARINE MAMMAL OBSERVATIONS DURING SURVEYS, AUGUST AND SEPTEMBER 2023**

Month	Species Observed	Number of Sightings	Number of Animals Observed
August	Unknown Seal	2	5
	Harp Seal	1	10
	Beluga Whale	1	10
September	Unknown Whale	1	2
<b>Total</b>		<b>5</b>	<b>27</b>

Most of the sightings occurred in August (four sightings), while one sighting of unknown whales occurred in September in Hudson Strait. The most commonly observed species were harp seal (one group of 10 individuals in Chesterfield Inlet) and beluga whale (one sighting of 10 individuals in Hudson Strait), both observed in August. One sighting of two unknown whales traveling together was recorded in Hudson Strait on September 15. No additional notes were taken to assist in species identification.

FIGURE 3.2-2 PERCENT WEATHER, SEA STATE, AND GLARE CONDITIONS DURING MARINE MAMMAL SURVEYS CONDUCTED IN 2023

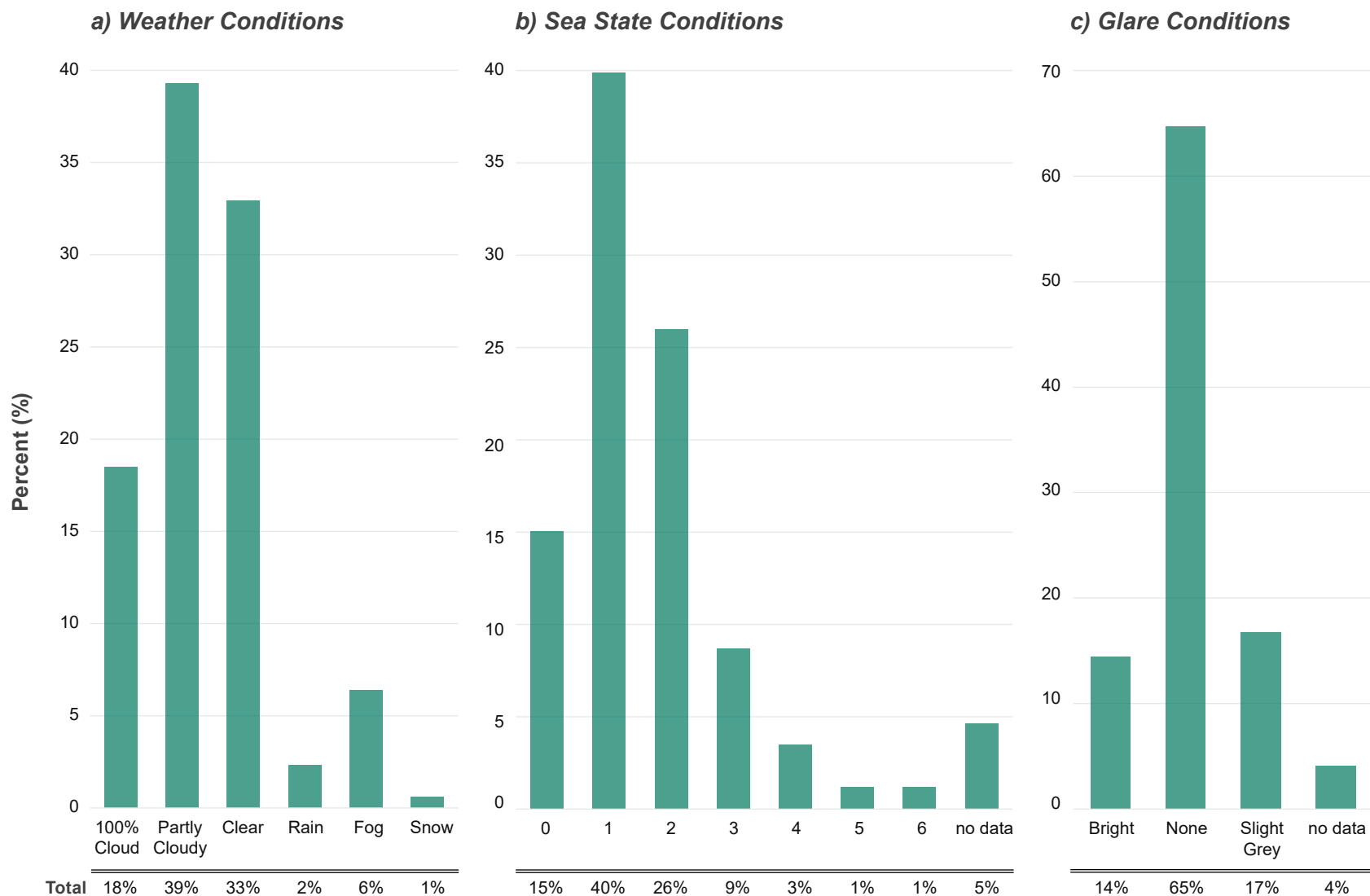


FIGURE 3.2-3 MARINE MAMMALS OBSERVED DURING SURVEYS, AUGUST AND SEPTEMBER, 2023



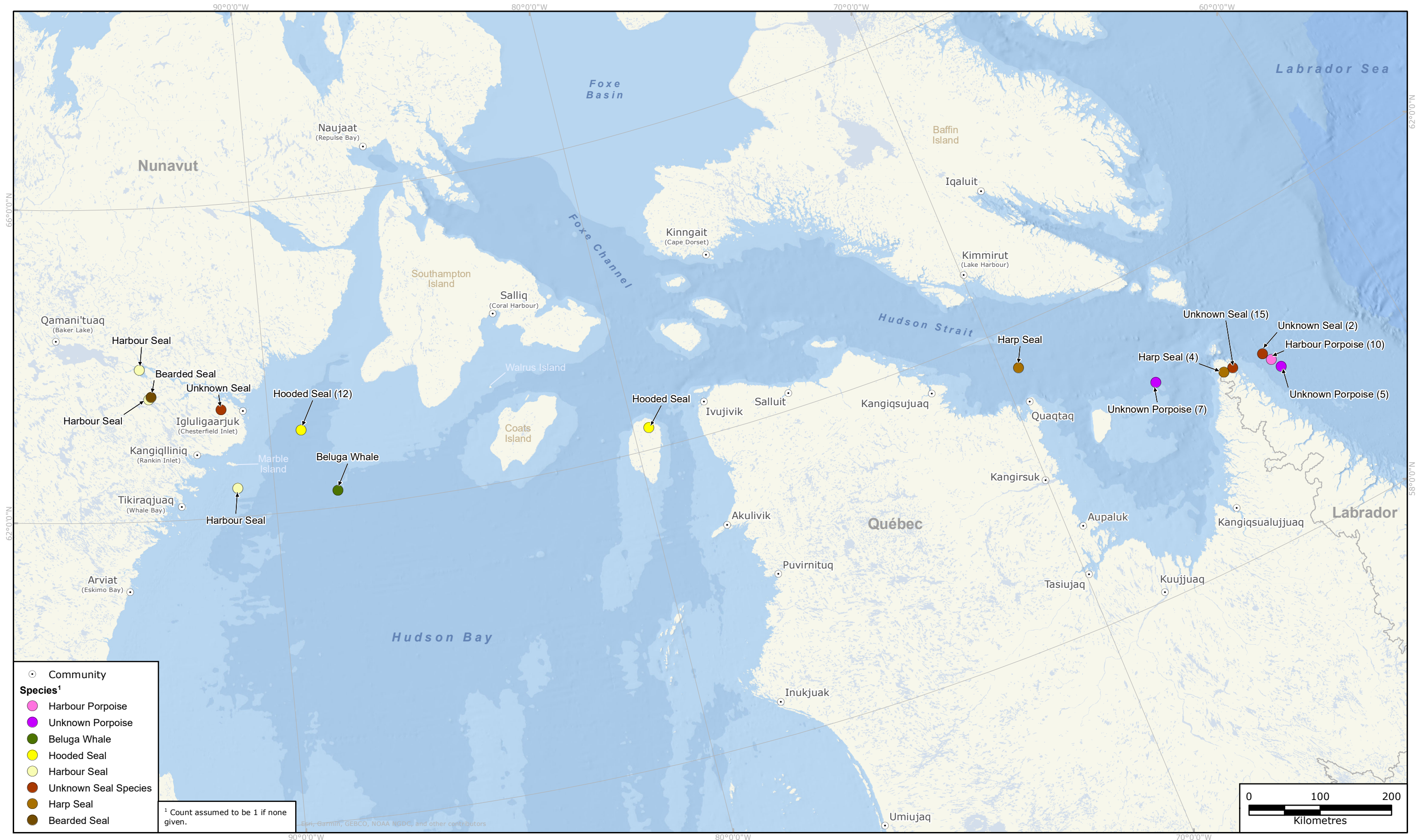
### 3.2.2.2 MARINE MAMMALS OBSERVED INCIDENTALLY, 2023

Incidental observations of marine mammals are sightings of animals while on the vessel, but outside of the dedicated MMSO survey time (i.e., “off-effort” sightings). There were 15 incidental observations (63 animals) during 2023 (Table 3.2-3; Figure 3.2-4). Six species were observed incidentally: beluga whale (*Delphinapterus leucas*), harbour porpoise (*Phocoena phocoena*), harbour seal (*Phoca vitulina*), harp seal (*Pagophilus groenlandicus*), hooded seal (*Cystophora cristata*), and bearded seal (*Erignathus barbatus*). In addition, unknown seal species were observed on three separate occasions and unknown porpoise species on two different occasions. Marine mammals were observed incidentally between July and October 2023.

**TABLE 3.2-3 INCIDENTAL OBSERVATIONS OF MARINE MAMMALS, JULY TO OCTOBER 2023**

Month	Species Observed	Number of Sightings	Number of Animals Observed
July	Bearded Seal	1	1
	Beluga Whale	1	1
	Harbour Seal	2	2
	Hooded Seal	1	1
August	Harp Seal	1	1
	Hooded Seal	1	12
	Unknown Porpoise	1	7
	Unknown Seal	1	1
September	Unknown Seal	1	15
October	Harbour Porpoise	1	10
	Harp Seal	1	4
	Harbour Seal	1	1
	Unknown Porpoise	1	5
	Unknown Seal	1	2
<b>Total</b>		<b>15</b>	<b>63</b>

FIGURE 3.2-4 INCIDENTAL OBSERVATIONS OF MARINE MAMMALS, JULY TO OCTOBER, 2023



### 3.2.2.3 SPECIES OBSERVED IN 2023

A summary of the marine mammal sightings by the MMSOs in 2023 is provided in the following sections.

#### **Beluga Whale**

Beluga whales were observed twice in 2023; once during dedicated surveys in August and once incidentally in July. A group of 10 beluga whales was observed on August 13 in Hudson Strait during a marine mammal moving vessel survey, and one beluga was observed incidentally on July 18 in Hudson Bay between Coats Island and Rankin Inlet.

There are seven distinct populations of beluga in Canada; the whales that could occur along the shipping route belong to the Western Hudson Bay Population (COSEWIC 2004). This population's core summer range is concentrated in the Churchill, Nelson, and Seal River estuaries in southern Hudson Bay (COSEWIC 2004). During fall migration (late-August or early September), the whales pass Rankin Inlet heading north, and travel between Coats Island and Southampton Island, and through Hudson Strait (COSEWIC 2004).

#### **Unknown Whale Species**

One group of two whales was observed during a transect survey on September 15 in Hudson Strait. No additional information was provided on this sighting; therefore, the species of whale remains unknown.

#### **Harbour Porpoise**

One harbour porpoise was observed incidentally on October 18 near the tip of Labrador. A group of approximately 10 animals was observed swimming in multiple small groups. In addition, two groups of porpoises were observed incidentally – one group of seven animals was observed on August 6, and one group of five animals was observed on October 18. Both groups were observed in Hudson Strait. Both sightings occurred near the tip of Labrador and were likely harbour porpoises.

#### **Seals**

A total of 14 separate sightings of seals were recorded in 2023: three separate occasions during dedicated marine mammal surveys (Figure 3.2-3) and 11 separate incidental sightings (Figure 3.2-4). During dedicated surveys, harp seals were observed on one occasion (total of 10 individuals) near the mouth of Chesterfield Inlet, and there were two separate sightings of unknown seal species; one individual was observed in Hudson Strait, and a group of four was observed in Hudson Bay (to the southeast). Seals were only observed in August during dedicated surveys (three separate sightings of 15 individuals; Table 3.2-2).

Seals were observed incidentally (i.e., off-effort) on an additional 11 occasions in 2023 (Figure 3.2-4). Three separate sightings of unknown seal species occurred in August (one individual), September (15 individuals), and October (two individuals; Figure 3.2-4; Table 3.2-3). There was one sighting of a single bearded seal in July, and two sightings (two individuals) of harbour seals



in July (Figure 3.2-4; Table 3.2-3). Hooded seals were observed on two separate occasions, in July and August (one and 12 individuals, respectively) and harp seals were also observed on two separate occasions, in August and October (one and four individuals, respectively; Figure 3.2-4; Table 3.2-3). The largest group of seals observed was of approximately 15 individual unknown seals, observed on September 11 near the entrance to Hudson Strait.

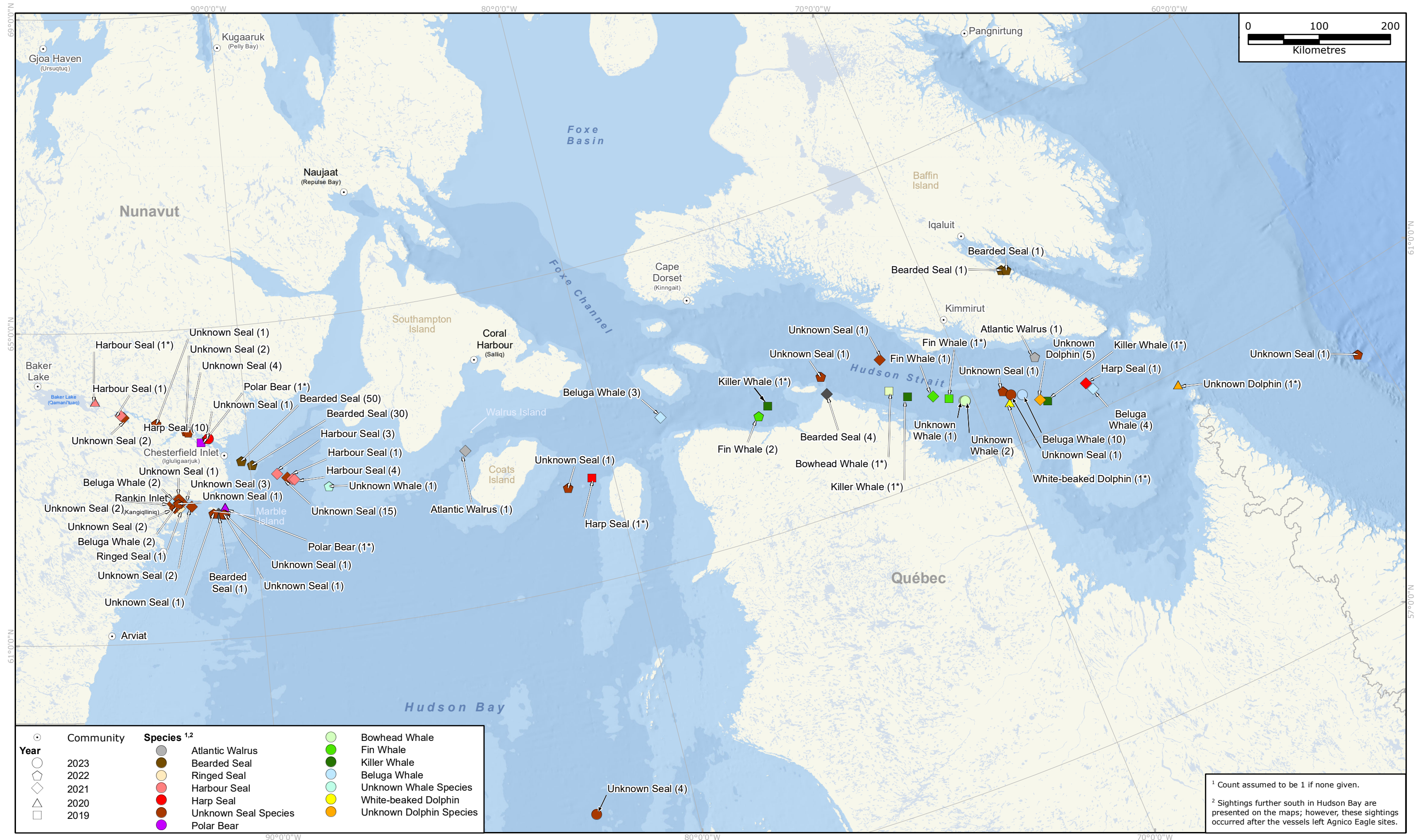
### 3.2.3 MARINE MAMMAL OBSERVATIONS 2017 TO 2023

Marine mammals have been observed during surveys and incidentally between 2017 and 2023 (Figures 3.2-5 and 3.2-6). A total of six different species were identified along the shipping route in 2023, and an additional three unknown species (unknown whale species, unknown porpoise species, and unknown seal species). This is a similar number to previous years, with the exception of 2021, when more species were observed. In 2022, seven species were identified, in 2021, 13 species were identified, in 2020, four species were recorded, in 2019, five species were recorded, and there were no recorded observations of marine mammals during surveys in 2018 or 2017; however, marine mammals were observed incidentally (off-effort) in 2017 (Table 3.2-4). From 2017 to 2022, the number of marine mammal individuals observed increased (Figure 3.2-7), with 2023 presenting less individuals observed than 2021 and 2022. The diversity of species (i.e., number of different species observed) has fluctuated (Figure 3.2-7), with the highest diversity observed in 2021 (13 species, excluding unknowns) and 2022 (seven species, excluding unknowns).

Species observed in previous years are summarized in Table 3.2-4. Sightings during 2022 included fin whale, pilot whale, walrus, polar bear, and seals. Sightings during 2021 included white-beaked dolphin, white-sided dolphin, blue whale, minke whale, beluga whale, fin whale, killer whale, walrus, polar bears and seals. Sightings during surveys in 2020 included white-beaked dolphins, walrus, polar bears, and seals. Sightings during surveys in 2019 included bowhead whale (*Balaena mysticetus*; one sighting of three to four individuals), fin whale (one sighting of one individual), harp seal (one sighting of four individuals), killer whale (three sightings totaling eight individuals), and polar bear (one sighting of one individual; Table 3.2-4). All sightings of whales in 2019 were within Hudson Strait (Figure 3.2-5). No unidentified marine mammals were recorded during the 2019 MMSO program.

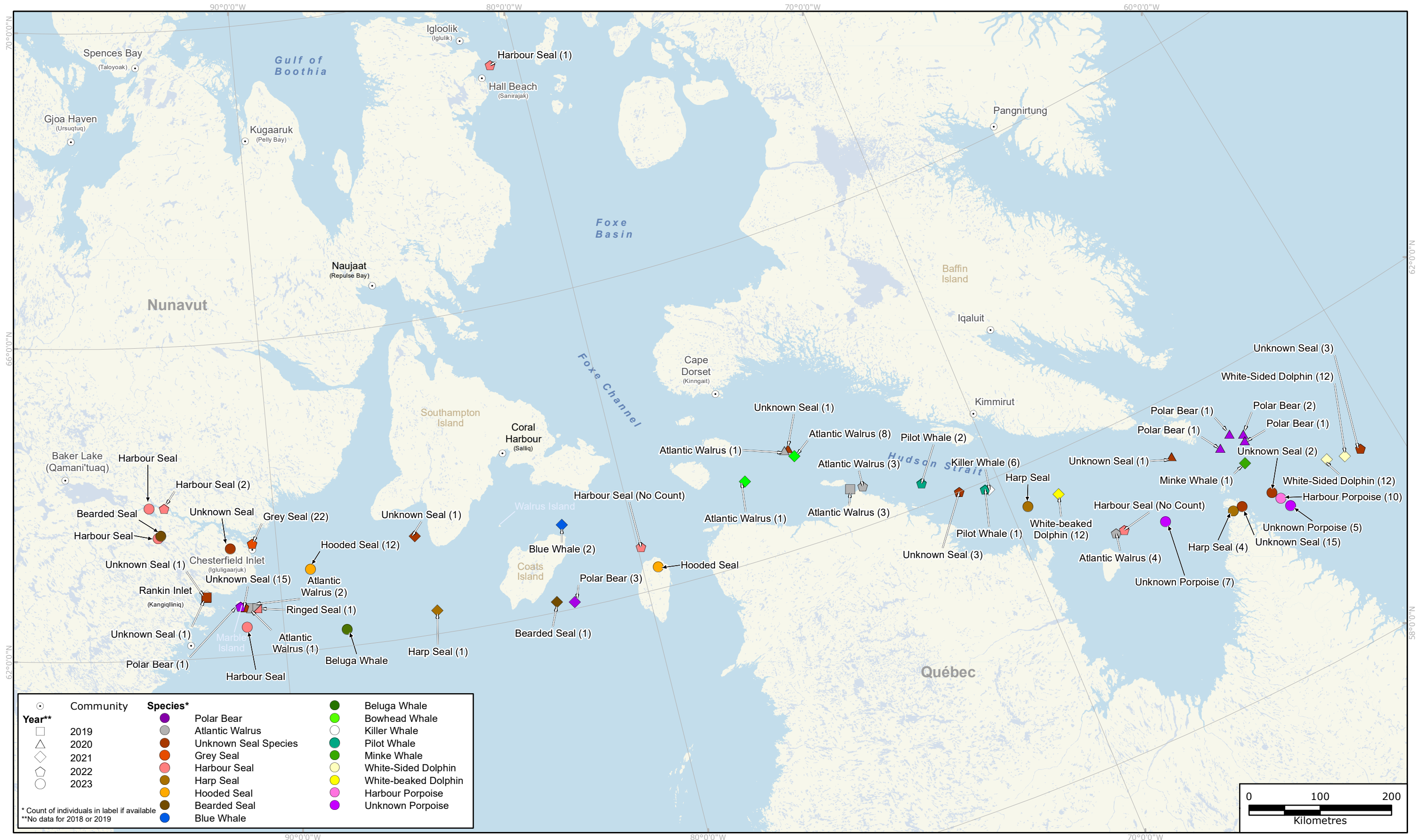
In 2017, marine mammals were only observed incidentally (i.e., off-effort), and no marine mammals were observed during dedicated surveys. The marine mammals observed incidentally in 2017 included walrus (three sightings of three, two, and one individual), harp seal (one sighting of one individual), and unidentified seal species (two sightings of one individual each; Table 3.2-4). The walrus were observed near Marble Island and near Charles Island in Hudson Strait (Figure 3.2-6).

FIGURE 3.2-5 MARINE MAMMALS OBSERVED DURING MMSO SURVEYS, 2019 TO 2023



<sup>1</sup> Count assumed to be 1 if none given.  
<sup>2</sup> Sightings further south in Hudson Bay are presented on the maps; however, these sightings occurred after the vessels left Agnico Eagle sites.

FIGURE 3.2-6 INCIDENTAL OBSERVATIONS OF MARINE MAMMALS, 2017 TO 2023



**TABLE 3.2-4 NUMBER<sup>1</sup> OF MARINE MAMMALS OBSERVED DURING SURVEYS AND INCIDENTALLY<sup>2</sup> BETWEEN 2017 AND 2023<sup>3</sup>**

Species	2017	2019	2020	2021	2022	2023	Total
Bowhead whale	-	3	-	-	-	-	<b>3</b>
Fin whale <sup>4</sup>	-	1	-	1	2	-	<b>4</b>
Killer whale	-	8	-	6	-	-	<b>14</b>
White-beaked dolphin	-	-	15	12	-	-	<b>27</b>
Unknown dolphin species	-	-	15	5	-	-	<b>20</b>
Harp seal	-	4	-	2	-	15	<b>21</b>
Harbour seal	-	-	1	9	5	3	<b>17</b>
Ringed seal	1	-	-	1	-	-	<b>2</b>
Unknown seal	2	-	4	29	37	23	<b>95</b>
Atlantic Walrus	6	-	4	10	8	-	<b>28</b>
Polar bear <sup>4</sup>	-	1	8	3	1	-	<b>13</b>
Blue whale <sup>4,5</sup>	-	-	-	2	-	-	<b>2</b>
Minke whale	-	-	-	1	-	-	<b>1</b>
White-sided dolphin	-	-	-	24	-	-	<b>24</b>
Long-finned Pilot Whale	-	-	-	-	3	-	<b>3</b>
Beluga whale	-	-	-	11	-	11	<b>22</b>
Unknown Whale	-	-	-	-	1	2	<b>3</b>
Grey Seal	-	-	-	-	22	-	<b>22</b>
Bearded seal	-	-	-	6	82	1	<b>89</b>
Harbour Porpoise	-	-	-	-	-	10	<b>10</b>
Hooded Seal	-	-	-	-	-	13	<b>13</b>
Unknown Porpoise	-	-	-	-	-	12	<b>12</b>
<b>Total</b>	<b>9</b>	<b>17</b>	<b>47</b>	<b>122</b>	<b>161</b>	<b>90</b>	<b>446</b>

<sup>1</sup> Numbers are given as individuals observed not number of separate sightings.

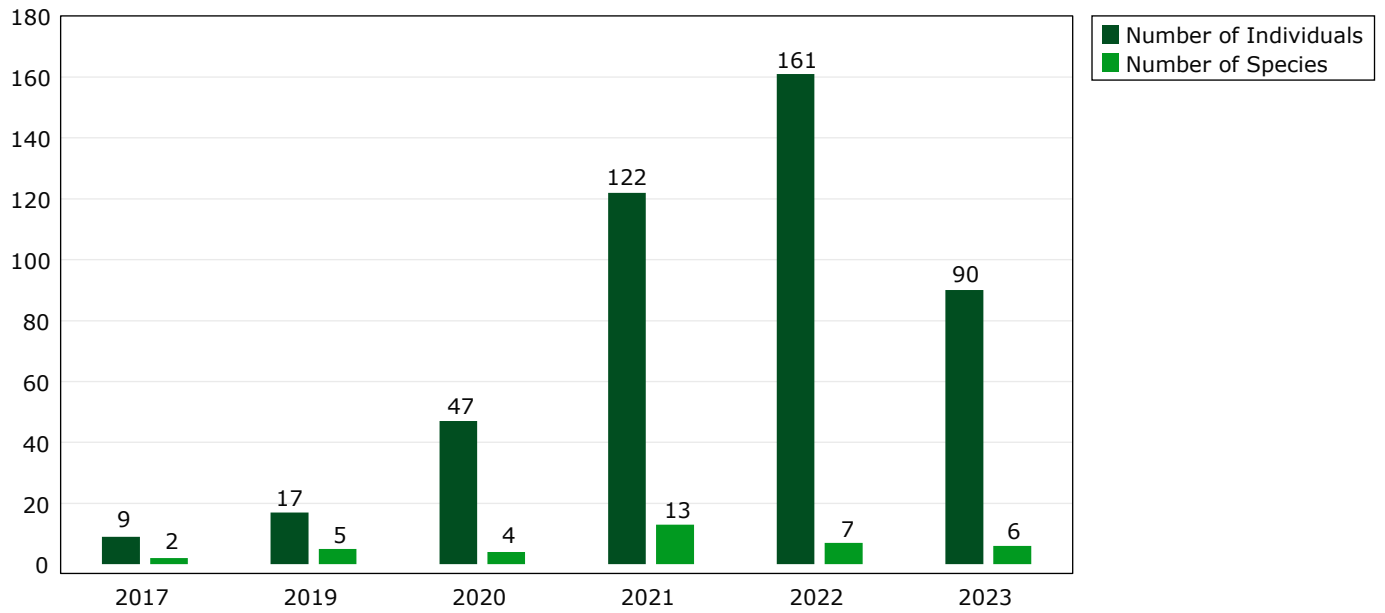
<sup>2</sup> Marine mammals observed both during dedicated surveys and off-effort are included in the table. Note that all sightings in 2017 were incidental, in 2019 were during dedicated surveys, and during 2020 through 2023 were both during surveys and incidental.

<sup>3</sup> No sightings were recorded in 2018.

<sup>4</sup> Species listed on Schedule 1 of the federal *Species at Risk Act* (SARA).

<sup>5</sup> It is possible that the blue whale sighting was not identified properly while on the vessel, as it would be a rare occurrence for a blue whale to be recorded in Hudson Bay.

FIGURE 3.2-7 NUMBER OF MARINE MAMMAL INDIVIDUALS AND NUMBER OF SPECIES OBSERVED, 2017 TO 2023



### 3.3 SEABIRD OBSERVATIONS

#### 3.3.1 SURVEY EFFORT

Seabird surveys have been conducted each year since 2018. In 2023, 116 transects with known distance effort were surveyed while vessels were moving, with a total of 2,658 km of seabird survey distance recorded over 68 hours (Table 3.3-1; Figure 3.3-1). An additional 106 hours of stationary surveys were conducted while the vessels were anchored (Table 3.3-2).

**TABLE 3.3-1 TEMPORAL AND SPATIAL EFFORT FOR MOVING VESSEL SEABIRD SURVEYS, 2018 TO 2023**

Year	Temporal Effort			Spatial Effort		
	Effort (hr)	No. of Transects with Effort	No. of Transects with No Effort <sup>1</sup>	Effort (km)	No. of Transects with Effort	No. of Transects with No Effort <sup>2</sup>
2018	139.87	72	7	407.1	33	46
2019	119.85	87	4	2,290.8	79	12
2020	111.88	84	14	3,614.8	79	20
2021	173.87	173	24	7,176.7	170	27
2022	98.47	182	46	10,423.3	163	65
2023 <sup>3</sup>	68.47	123	5	2,657.9	116	12

<sup>1</sup> Surveys without distance effort did not have location coordinates recorded at the start and/or end of the surveys.

<sup>2</sup> Surveys without temporal effort did not have the start and/or end times recorded.

<sup>3</sup> Fewer vessels travelled to Agnico Eagle in 2023 (23 vessels, compared to 27 vessels in 2022 and 29 in 2021), partially accounting for the lower survey effort.

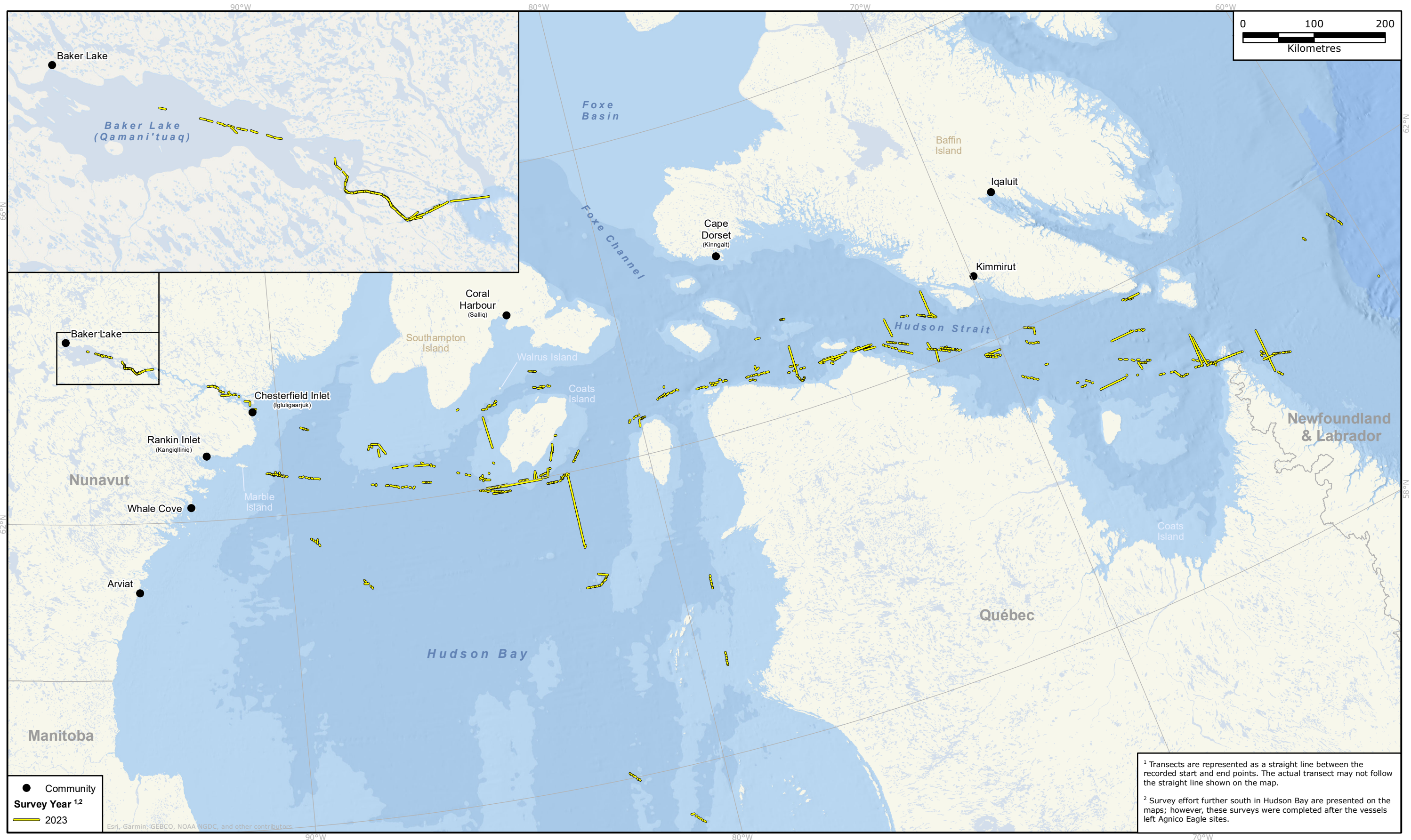
**TABLE 3.3-2 TEMPORAL EFFORT FOR STATIONARY SEABIRD SURVEYS, 2018 TO 2023**

Year	Effort (hr)	No. of Points with Effort	No. of Points with No Effort <sup>1</sup>
2018	18.75	5*	0
2019	19.82	15	27
2020	152.00	104	40
2021	152.37	111	3
2022	19.65	41	105
2023	106.43	134	23

\* Surveys in 2018 did not include locations; therefore, these observations were not used in analysis.

<sup>1</sup> Surveys with No Effort did not have start and/or end times recorded.

FIGURE 3.3-1 MOVING TRANSECT SEABIRD SURVEY EFFORT, 2023



Some surveys did not have effort recorded; surveys without spatial effort did not have location coordinates recorded at the start and/or end of the surveys, while surveys without temporal effort did not have the start and/or end times recorded. Surveys without spatial effort were not used for analysis (Table 3.3-1). Appendix E summarizes all 2023 seabird surveys and Appendix F summarizes all 2023 seabird sightings.

Spatial effort for moving surveys increased with each survey year between 2018 and 2022, with a decrease in spatial effort in 2023 (Table 3.3-1). Spatial effort in 2023 was approximately 75% lower than the effort of 2022 (2,658 km compared to 10,424 km), and the lowest spatial effort since 2019 (Table 3.3-1). Similarly, 2023 had the lowest temporal effort of all years with a total of 69 total survey hours which is approximately 30% less effort than 2022. These changes in temporal and spatial effort are likely attributed to the a decreased number of moving vessel surveys in 2023 (128 moving vessel surveys) compared to 2022 (228 moving vessel surveys), fewer vessel overall travelling to Agnico Eagle in 2023 (23 vessels compared to 27 in 2022 and 29 in 2021), and a focus on correctly using the interval survey methods, which involved the successful implementation of six short consecutive survey periods opposed to one long survey period. In 2023, updates to datasheets resulted in more consistent implementation of this snapshot survey methods, which may have provided more accurate spatial effort estimates during seabird surveys. Additionally, the differences in reduction of spatial survey effort may be the result of vessels moving slower during surveys than in previous years.

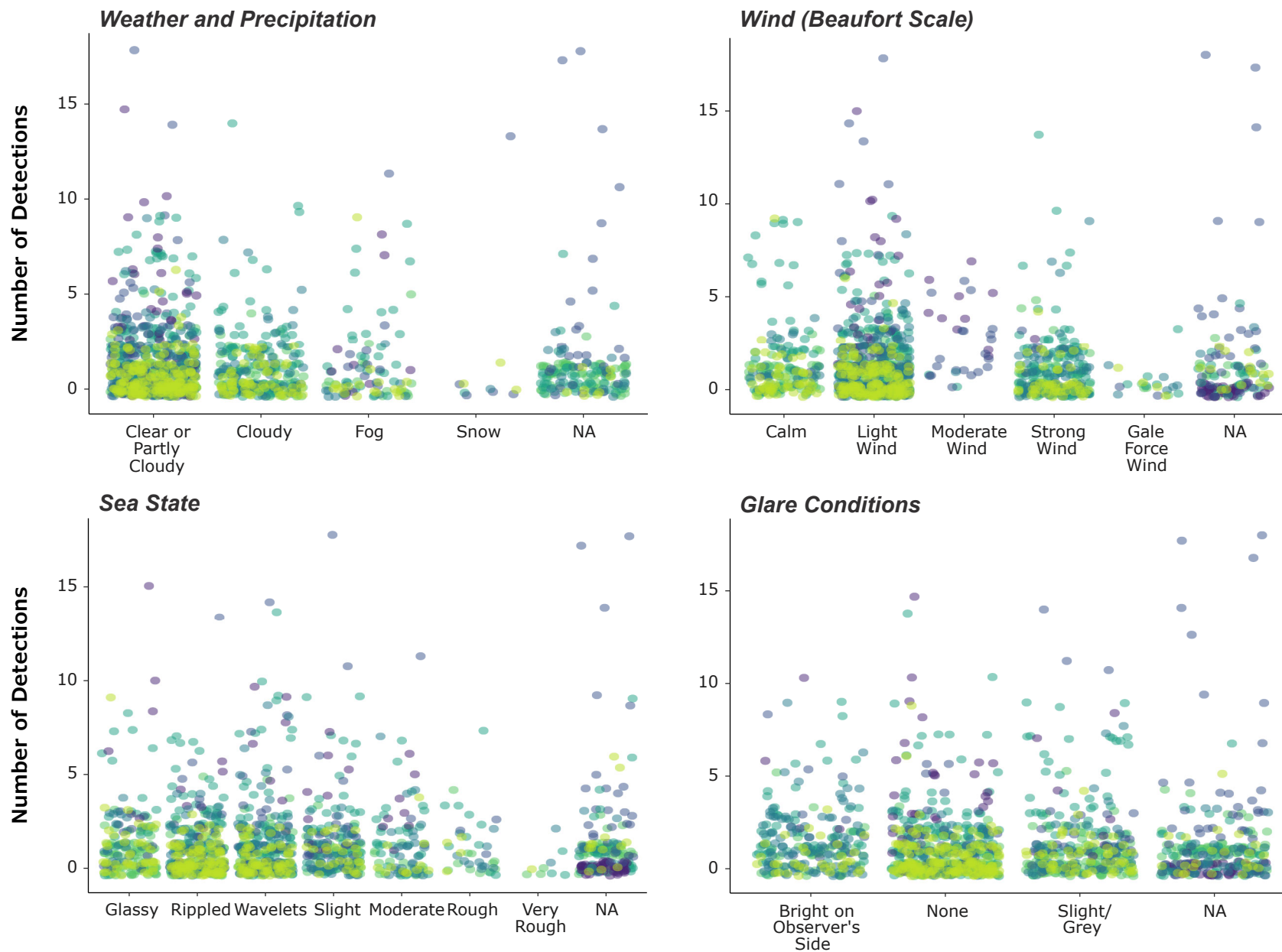
Stationary vessel surveys were conducted in similar numbers in 2023 compared to recent years. However, temporal effort was successfully recorded at much higher rates in 2023, with 85% of stationary surveys including temporal effort as opposed to 30% of surveys in 2022 (Table 3.3-2). This increase in effort recording is further indication that data collection more consistently followed the new survey methods in 2023.

#### 3.3.1.1 ENVIRONMENTAL VARIABLES AND WEATHER CONDITIONS DURING SURVEYS

Key environmental variables that have the potential to impact seabird detection were plotted for visual assessments of trends in detection (Figure 3.3-2). Detections varied across weather conditions and years without clear trends in most cases; this indicates that detectability was not greatly affected by variable weather conditions. Detections appear lower in some severe adverse weather, including snow, gale force winds, and very rough sea states (Figure 3.3-2). However, there were relatively few surveys conducted in these adverse conditions, making trends difficult to determine. These observations only represent a small proportion of the thousands of detections recorded across all years of surveys, so it is unlikely that the overall detection estimates are impacted by weather variables. Models were created without covariates like weather variables due to low sample sizes restricting model fit. However, visual assessment indicates this omission is not likely impacting model results.



FIGURE 3.3-2 WEATHER VARIABLES SUMMARIZED BY SEABIRD DETECTIONS



### 3.3.2 MOVING VESSEL SEABIRD OBSERVATIONS 2018 TO 2023

Analyses included only on-transect sightings and did not use re-sightings of the same birds. Table 3.3-3 summarizes sample sizes for surveys, detections (groups) and individuals (total number of birds). The average number of detections and the average number of individuals per detection varies across years and survey type (stationary/moving). The number of seabird detections during moving vessel surveys in 2023 was lower than those recorded in 2021 or 2022 but higher than those recorded prior to 2021 (n = 336; Table 3.3-3). The number of seabird detections per survey in 2023 was 2.89 which is a 22% decrease from the previous year (3.89 detections per survey in 2022). However, the average number of individuals per detection in 2023 was similar to those recorded in 2022 and 2018 and approximately 35% smaller than those recorded from 2019 to 2021. This indicates that seabirds were recorded in much smaller group sizes in both 2022 and 2023.

**TABLE 3.3-3 SEABIRD SURVEY SAMPLE SIZES FOR MOVING VESSEL AND STATIONARY SURVEYS, 2018 TO 2023**

Year	Moving Vessel Surveys				Stationary Vessel Surveys			
	Transects	Detections	Individuals	Avg. Indiv/ Detection	Points	Detections	Individuals	Avg. Indiv/ Detection
2018	33	150	574	3.82	5	0*	0*	-
2019	79	271	1,639	6.04	42	22	24	1.09
2020	79	116	683	5.89	144	103	536	5.20
2021	170	459	2,850	6.21	115	145	1,268	8.74
2022	163	535	2,006	3.75	142	131	764	5.83
2023	116	336	1,328	3.92	157	269	1,010	3.75

\* Locations were not given for 2018 stationary vessel data. Therefore, these observations were not used in analysis.

#### 3.3.2.1 SPECIES PRESENT

Seabird sightings in 2023 were lower than the previous two years, with a total of 1,984 individual birds belonging to 21 known species and four unknown species recorded (Table 3.3-4). Across all six years of surveys between 2018 and 2023, 10,608 individual birds belonging to 30 known species and nine unknown species have been recorded during moving vessel surveys (Table 3.3-4; Figure 3.3-3).

**TABLE 3.3-4 BIRD SPECIES RECORDED DURING MOVING VESSEL SEABIRD SURVEYS, 2018 TO 2023**

Species	Scientific Name	2018-2019	2020	2021	2022	2023	Total
Arctic Tern	<i>Sterna paradisaea</i>	0	0	5	0	<b>0</b>	<b>5</b>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	2	0	1	1	<b>1</b>	<b>5</b>
Black-legged Kittiwake	<i>Rissa tridactyla</i>	12	3	0	0	<b>10</b>	<b>25</b>

Species	Scientific Name	2018-2019	2020	2021	2022	2023	Total
Black Guillemot	<i>Cephus grylle</i>	151	0	6	61	<b>6</b>	<b>224</b>
Black Scoter	<i>Melanitta americana</i>	4	2	4	2	<b>0</b>	<b>12</b>
Cackling/Canada Goose	<i>Branta hutchinsii/canadensis</i>	100	0	15	8	<b>87</b>	<b>210</b>
Common Eider	<i>Somateria mollissima</i>	16	81	76	5	<b>11</b>	<b>189</b>
Common Loon	<i>Gavia immer</i>	33	2	10	5	<b>5</b>	<b>55</b>
Common Murre	<i>Uria aalge</i>	40	3	538	161	<b>2</b>	<b>744</b>
Dovekie	<i>Alle alle</i>	103	19	87	41	<b>15</b>	<b>265</b>
Glaucous Gull	<i>Larus hyperboreus</i>	175	33	77	15	<b>26</b>	<b>326</b>
Great Cormorant	<i>Phalacrocorax carbo</i>	0	8	1	2	<b>0</b>	<b>11</b>
Great Shearwater	<i>Puffinus gravis</i>	0	1	0	1	<b>0</b>	<b>2</b>
Great Skua	<i>Stercorarius skua</i>	0	48	1	2	<b>1</b>	<b>52</b>
Harlequin Duck <sup>1</sup>	<i>Histrionicus histrionicus</i>	10	0	0	0	<b>0</b>	<b>10</b>
Herring Gull	<i>Larus argentatus</i>	288	73	111	178	<b>515</b>	<b>1165</b>
Iceland Gull	<i>Larus glaucoides</i>	78	4	30	3	<b>8</b>	<b>123</b>
Ivory Gull <sup>2</sup>	<i>Pagophila eburnea</i>	2	0	0	0	<b>0</b>	<b>2</b>
Leach's Storm-petrel	<i>Oceanodroma leucorhoa</i>	8	0	16	5	<b>1</b>	<b>30</b>
Least Sandpiper	<i>Calidris minutilla</i>	5	1	0	0	<b>0</b>	<b>6</b>
Long-tailed Duck	<i>Clangula hyemalis</i>	7	0	14	7	<b>0</b>	<b>28</b>
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	7	0	1	5	<b>0</b>	<b>13</b>
Manx Shearwater	<i>Puffinus puffinus</i>	3	0	122	6	<b>0</b>	<b>131</b>
Northern Fulmar	<i>Fulmarus glacialis</i>	196	300	391	678	<b>607</b>	<b>2172</b>
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	0	14	25	7	<b>24</b>	<b>70</b>
Peregrine Falcon	<i>Falco peregrinus</i>	3	1	3	0	<b>0</b>	<b>7</b>
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	8	48	1	24	<b>12</b>	<b>93</b>
Razorbill	<i>Alca torda</i>	0	2	63	235	<b>184</b>	<b>484</b>
Red-breasted Merganser	<i>Mergus serrator</i>	0	2	5	4	<b>1</b>	<b>12</b>
Ruddy Turnstone	<i>Arenaria interpres</i>	1	0	0	0	<b>2</b>	<b>3</b>
Sabine's Gull	<i>Xema sabini</i>	4	5	0	0	<b>0</b>	<b>9</b>
Snow Goose	<i>Chen caerulescens</i>	542	10	1	32	<b>0</b>	<b>585</b>
Snowy Owl	<i>Bubo scandiacus</i>	1	0	7	0	<b>0</b>	<b>8</b>

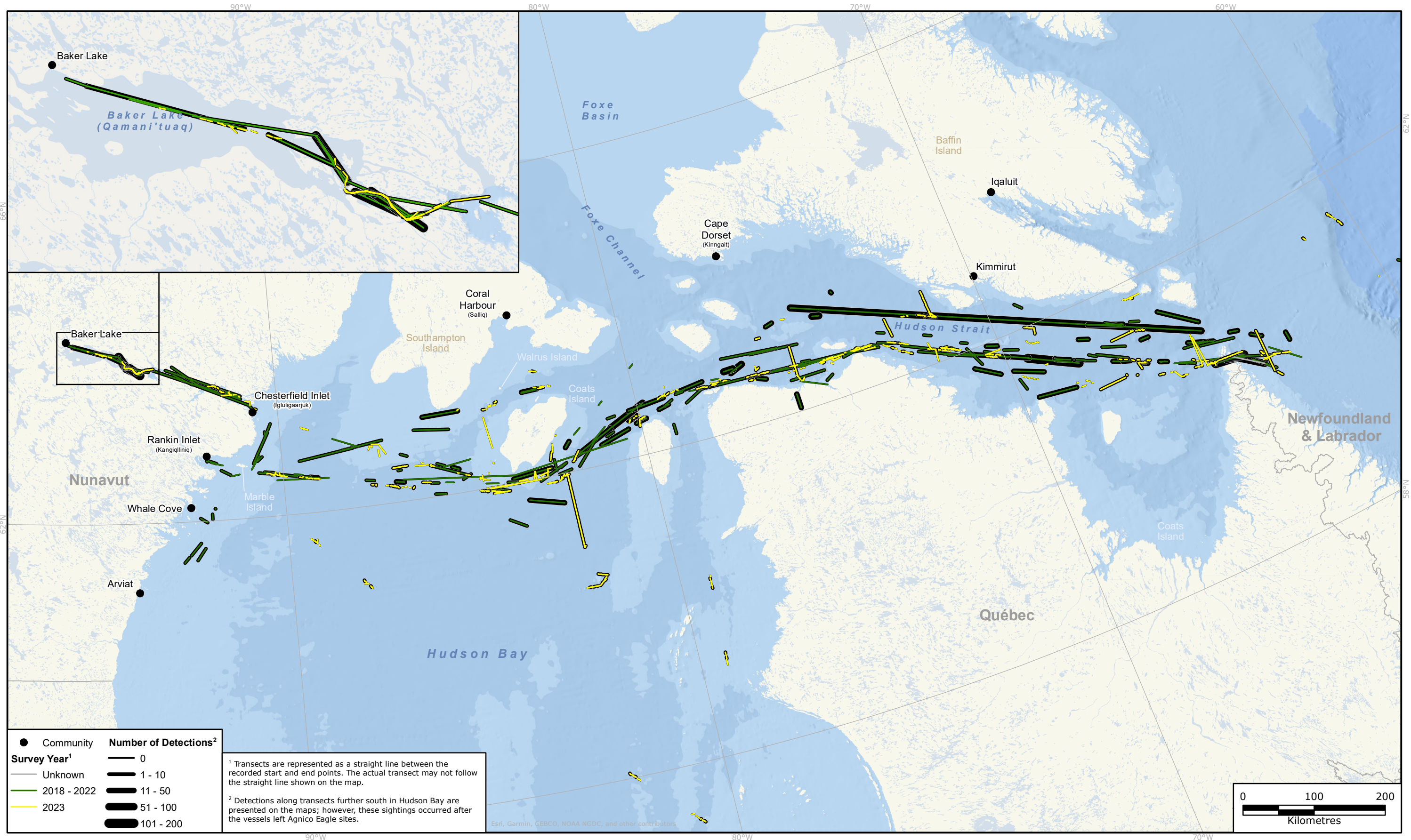
Species	Scientific Name	2018-2019	2020	2021	2022	2023	Total
Sooty Shearwater	<i>Ardenna grisea</i>	0	2	9	15	0	26
Surf Scoter	<i>Melanitta perspicillata</i>	0	0	0	0	7	7
Thayer's Gull	<i>Larus thayeri</i>	5	1	0	0	0	6
Thick-billed Murre	<i>Uria lomvia</i>	369	90	800	84	0	1343
White-winged Scoter	<i>Melanitta deglandi</i>	0	5	3	0	0	8
Wilson's Storm-petrel	<i>Oceanites oceanicus</i>	31	0	23	4	179	237
Unknown Bird		87	0	101	2	15	205
Unknown Duck		103	3	73	40	0	219
Unknown Falcon		1	2	2	0	0	5
Unknown Goose		0	0	6	1	43	50
Unknown Gull		82	152	108	234	0	576
Unknown Hawk		2	0	1	0	79	82
Unknown Jaeger		3	0	0	0	143	146
Unknown Murre		0	43	113	460	0	616
Unknown Sandpiper		6	0	0	0	0	6
<b>Total</b>		<b>2,488</b>	<b>958</b>	<b>2,850</b>	<b>2,328</b>	<b>1,984</b>	<b>10,608</b>

<sup>1</sup> Species listed as Special Concern on Schedule 1 of the federal *Species at Risk Act* (SARA).

<sup>2</sup> Species listed as Endangered on Schedule 1 of the federal SARA.

The most common species recorded in 2023 were northern fulmar (n = 607), herring gull (n = 515), razorbill (n = 184), and Wilson's storm-petrol (n = 179). Northern fulmar continue to be one of the most commonly reported species in 2023 which has been consistent across all survey years. In comparison, razorbill were recorded in high number for the second straight year, with a small decrease from 2022. In 2023 both the Wilson's storm-petrol and herring gull were recorded in higher abundance than any other survey year. The number of unknown gulls recorded in 2023 was zero and therefore it may be possible that surveyors were more likely to identify gulls as herring gulls in 2023 as opposed to unknown gulls in previous years. Both common and thick-billed murre were frequently observed prior to 2023, however, in 2023 total observations of murre were only two individuals. It is possible that this could be explained by misidentification; however, considering most observers failed to observe murre it is likely they were less abundant in 2023. The surf scoter was recorded for the first time in 2023 during moving vessel surveys with a total of seven individuals observed. Potential mis-identifications of species which are out of range have occurred in previous years, but typically in low numbers, such as records of great cormorant and great shearwater (Table 3.3-4).

FIGURE 3.3-3 SEABIRD DETECTIONS DURING MOVING VESSEL SURVEYS, 2018 TO 2023



### 3.3.2.2 DISTANCE ANALYSIS: SEABIRD DETECTION AND DENSITY ESTIMATES

Distance analysis was conducted for moving vessel surveys in each year between 2019 and 2023 and all years combined (2018 to 2023). No distance model was fit independently for 2018 due to a low number of surveys.

As described in the methods, seabird observations were analyzed using distance analysis, which accounts for the fact that animals are more likely to be seen when they are closer to the observer. The first step in this analysis is to examine whether the detectability curve (the change in detectability with distance from observer) and the detection estimate (probability of detecting a bird within the 300 m survey area) is the same between years.

Model fitting was mostly consistent across years, indicating that the detectability curve was the same between years of the study (according to AIC rankings and detectability estimates; Appendix G). The best model fits across years were hazard rate functions, which means that detection remains high at closer distances (i.e., birds are just as likely to be detected within 100 m of an observer) but drops off steeply as distance increases. In 2023 the best fitting model was half-normal with cosine adjustment; however, hazard-rate models were within a delta AIC of 2, suggesting there was not a significant difference in fit between models. Detectability estimates were also consistent between years, ranging from a low of 0.337 in 2020 to a high of 0.500 in 2022 (Table 3.3-5). In 2023, the detectability estimate and the surrounding 95% confidence interval ( $0.400 \pm .071$ ; Table 3.3-5) fall within the estimates of previous years. A higher detection estimate indicates that seabirds are more likely to be seen and recorded, even if they are a greater distance away from the ship/observer. The detectability estimate itself is not a key result, but consistency in estimates indicates that data are similar across years.

**TABLE 3.3-5 DETECTION AND DENSITY ESTIMATES BY YEAR (2019 TO 2023) DURING MOVING VESSEL SURVEYS**

Year	Detection Estimate	Detections 95% CIs <sup>1</sup>	Density (birds/km <sup>2</sup> )	Density 95% CIs <sup>1</sup>
All Years	0.430	0.403 – 0.457	0.840	0.789 – 0.894
2019	0.426	0.316- 0.537	1.879	0.421- 3.170
2020	0.337	0.272- 0.402	0.701	0.421- 1.169
2021	0.425	0.385- 0.465	1.072	0.509- 2.261
2022	0.500	0.450 – 0.551	0.473	0.427 – 0.523
2023	0.400	0.328 – 0.471	1.441	1.205 – 1.724

<sup>1</sup> Confidence Intervals (CIs). Values indicate the range in which 95% of samples fall.

The second part of distance sampling is to estimate the density, in this case the density of seabirds, accounting for the lower detectability with greater distance. Predicted seabird densities varied across years, with 2023 having the second highest predicted seabird density (1.411 birds/km<sup>2</sup>) amongst all years (0.473-1.879; Table 3.3-5). The differences in estimated density are a reflection of variability in the effort and number of birds detected between years.

Variability in the number of birds detected is driven by several elements, including random occurrence of large flocks (e.g., 100 to 200 birds), observer experience, local habitat variation near islands or channels, and time of day. These are differences in the number of birds encountered/recorded, rather than true differences in regional bird abundance. Therefore, the density estimate for all years of data together is likely the most accurate.

### 3.3.3 STATIONARY VESSEL SEABIRD OBSERVATIONS 2019 TO 2023

#### 3.3.3.1 SPECIES PRESENT

A total of 3,602 individuals from 30 known species and nine unknown species were recorded during stationary vessel surveys from 2019 to 2023 (Table 3.3-6, Figure 3.3-4). Nearly 33% of records were from 2021 (n = 1,268 individuals), while 2023 made up an additional 28% of observations (n = 1,010). In 2023, stationary surveys included two observations of greater scaup (*Aythya marila*) which had not previously been recorded for this program. There are breeding populations of greater scaup across northern Quebec and Nunavut inland adjacent to the shipping routes. The most common species recorded in 2023 were herring gull (n = 406), cackling/Canada goose (n = 181), unknown duck (n = 160), and snow goose (n = 117; Table 3.3-6). Snow goose was also among the most common species recorded between 2020 and 2022. Geese and ducks are likely recorded more frequently in stationary vessel surveys because many of these occur near shores, opposed to moving vessel surveys which happen throughout the open water areas. A noticeable decrease in the number of unknown gull observations and the increase in herring gull observations suggest that surveyors were more likely to positively identify herring gulls than in previous years.

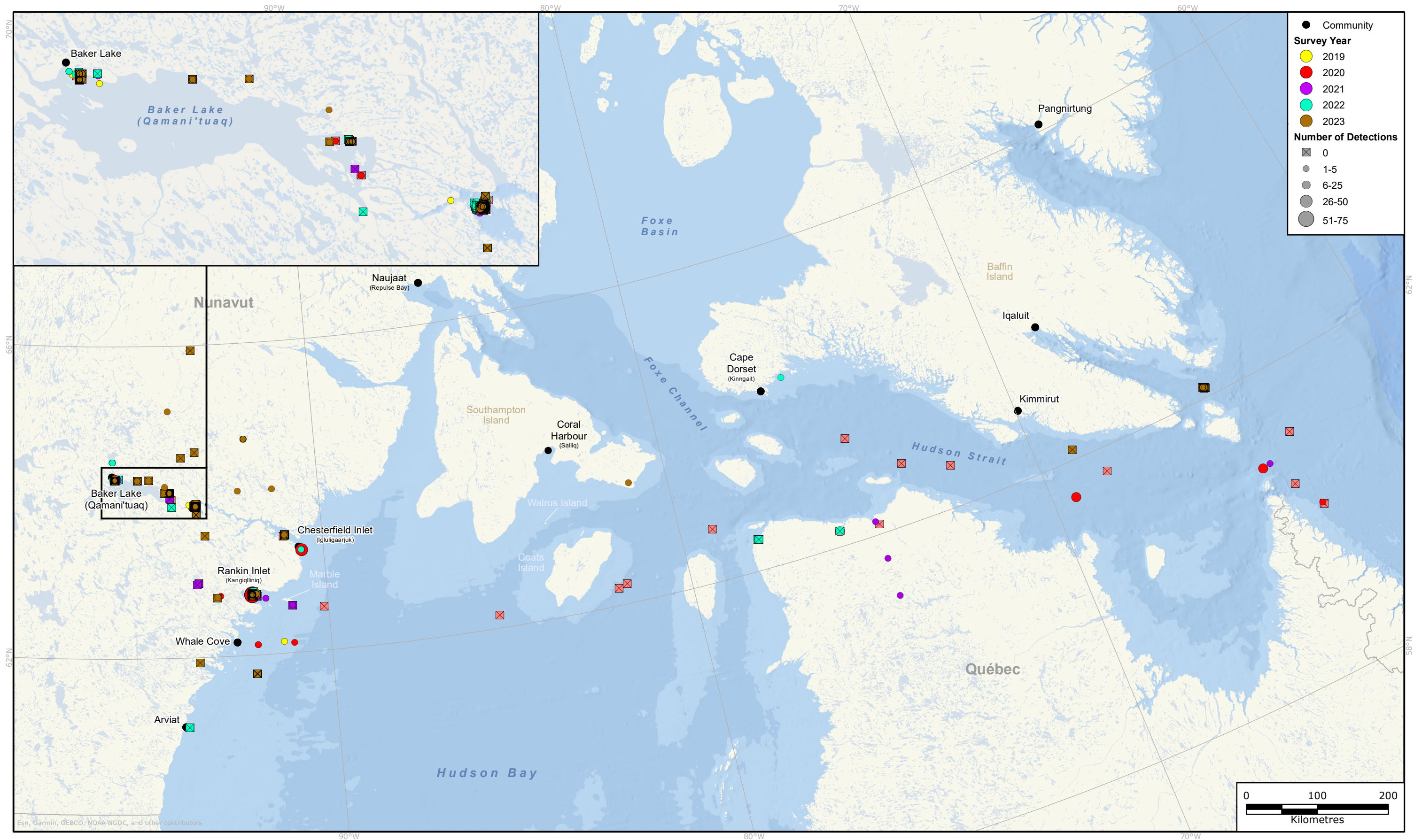
**TABLE 3.3-6 BIRD SPECIES RECORDED DURING STATIONARY SEABIRD SURVEYS, 2019 TO 2023**

Species	Scientific Name	2019	2020	2021	2022	2023	Total
American Crow	<i>Corvus brachyrhynchos</i>	0	1	0	0	3	4
Arctic Tern	<i>Sterna paradisaea</i>	0	1	0	0	0	1
Black-legged Kittiwake	<i>Rissa tridactyla</i>	0	8	0	0	0	8
Black Guillemot	<i>Cephus grylle</i>	1	4	17	48	0	70
Black Scoter	<i>Melanitta Americana</i>	2	0	9	8	0	19
Cackling/Canada Goose	<i>Branta hutchinsii/canadensis</i>	0	25	447	90	181	743
Common Eider	<i>Somateria mollissima</i>	0	8	3	11	0	22
Common Loon	<i>Gavia immer</i>	0	0	2	2	0	4
Common Murre	<i>Uria aalge</i>	0	0	20	2	0	22
Dovkie	<i>Alle alle</i>	0	0	0	17	0	17
Glaucous Gull	<i>Larus hyperboreus</i>	4	18	6	16	0	44
Great Cormorant	<i>Phalacrocorax carbo</i>	0	0	1	0	0	1

Species	Scientific Name	2019	2020	2021	2022	2023	Total
Great Skua	<i>Stercorarius skua</i>	0	0	2	0	0	2
Greater Scaup	<i>Aythya marila</i>	0	0	0	0	2	2
Herring Gull	<i>Larus argentatus</i>	6	64	41	64	406	581
Iceland Gull	<i>Larus glaucoides</i>	0	0	2	19	1	22
Leach's Storm-petrel	<i>Oceanodroma leucorhoa</i>	0	1	1	0	0	2
Long-tailed Duck	<i>Clangula hyemalis</i>	0	0	0	2	0	2
Northern Fulmar	<i>Fulmarus glacialis</i>	2	170	147	45	48	412
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	0	0	0	1	0	1
Peregrine Falcon	<i>Falco peregrinus</i>	3	5	0	0	0	8
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	1	4	5	1	0	11
Razorbill	<i>Alca torda</i>	0	3	0	7	2	12
Red-breasted Merganser	<i>Mergus serrator</i>	0	0	1	1	0	2
Sandhill Crane	<i>Grus canadensis</i>	0	1	0	0	0	1
Snow Goose	<i>Chen caerulescens</i>	0	176	419	182	117	894
Snowy Owl	<i>Bubo scandiacus</i>	0	1	0	0	0	1
Thick-billed Murre	<i>Uria lomvia</i>	0	17	0	3	0	20
White-winged Scoter	<i>Melanitta deglandi</i>	0	2	0	0	0	2
Wilson's Storm-petrel	<i>Oceanites oceanicus</i>	0	0	2	0	0	2
Unknown Bird		1	0	35	0	2	38
Unknown Duck		0	0	48	23	160	231
Unknown Falcon		0	2	0	0	0	2
Unknown Goose		0	0	0	7	25	32
Unknown Gull		4	17	59	206	16	302
Unknown Hawk		0	0	1	0	0	1
Unknown Jaeger		0	0	0	0	12	12
Unknown Murre		0	6	0	9	35	50
Unknown Sandpiper		0	2	0	0	0	2
<b>Total</b>		<b>24</b>	<b>536</b>	<b>1,268</b>	<b>764</b>	<b>1,010</b>	<b>3,602</b>



FIGURE 3.3-4 SEABIRD DETECTIONS DURING STATIONARY VESSEL SURVEYS, 2019 TO 2023



### 3.3.3.2 DISTANCE ANALYSIS: SEABIRD DETECTION ESTIMATE

Stationary vessel surveys had lower sample sizes and, therefore, limited model fitting capabilities. Distance models were run for individual years from 2020 to 2023 and for all years combined (2019 through 2023), though very little data were collected in 2019.

Only detection estimates were calculated for stationary vessel surveys. Density estimates could not be calculated because stationary effort requires repeated surveys at the same locations. While several of the stationary vessel surveys were conducted at anchor in Rankin Inlet, the sample size is currently too small for modelling. However, with additional sampling modelling for a density function may be possible in future years.

Detection estimates indicate the relative likelihood that a seabird will be detected within the survey area if it is there, taking into account the lower detectability when birds are farther away from the observer. A higher detection estimate indicates that seabirds are more likely to be seen and recorded, even if they are a greater distance away from the ship/observer.

The three key model selections were fit to estimate how quickly detectability changes with distance from the observer. Of the three model selection functions, hazard-rate models performed the best by AIC rating for all years of data combined (Table 3.3-7). However, the detection estimates for the top four AIC rated models were low (0.053; Table 3.3-7) with relatively high standard errors, making the detection estimates unpredictable and indicating poor model fit. Therefore, the half-normal model was selected as the most representative for all years of data because it indicated a reasonable detection estimate and standard error (Table 3.3-7). The half-normal model estimates that detection decreases gradually with greater distance from the observer. Although the model fitting was less consistent for the stationary vessel data compared to the moving vessel surveys, detection estimates for stationary vessel surveys were consistent between years, suggesting that results are likely reliable (Table 3.3-8).

**TABLE 3.3-7 TOP AIC-RATED DISTANCE MODELS, STATIONARY VESSEL SURVEYS, 2019 TO 2023**

Model Key and Adjustment	Detection Estimate	Detection SE <sup>1</sup>	$\Delta$ AIC <sup>2</sup>
Hazard-rate with cosine adjustment	0.053	0.008	0.000
Hazard-rate with polynomial adjustment	0.053	0.008	0.000
Half-normal with polynomial adjustment	0.086	0.006	253.8

<sup>1</sup> Standard Error (SE). Standard error is a measure of variability where values indicate the statistical accuracy of the detection estimate.

<sup>2</sup> Akaike's Information Criterion (AIC). Values provide relative rankings between models fit with the same data, where the lowest AIC ranked model is considered the best fit to the data.

The detection estimate for all years of data slightly decreased with the addition of 2023 data (estimate decreased from 0.221 to 0.196; Table 3.3-8). The detection estimate for stationary vessel surveys is roughly half of that for moving vessels, suggesting that seabirds are less likely to be detected during stationary vessel surveys compared to moving vessel surveys. The result is

generally consistent with the data, which indicate that both detections and number of birds recorded per survey were lower for stationary surveys compared to moving surveys (Table 3.3-3). The detection estimate for stationary vessel surveys was similar in 2023 to previous years (0.162; Table 3.3-8). The number of surveys and detection rates per survey was highest in 2023 with 134 surveys and 1.713 detections per survey (previously ranged between 0.524 in 2019 and 1.261 in 2021). This suggests that the detection estimates are not being driven by a lack of detection data and instead may be naturally lower than moving vessel surveys, i.e., seabirds are more difficult to detect on stationary vessels compared to moving vessels.

**TABLE 3.3-8 DETECTION ESTIMATES BY YEAR, STATIONARY VESSEL SURVEYS BETWEEN 2020 AND 2023**

Year	Detection Estimate	Detection 95% CIs <sup>1</sup>
All Years	0.196	0.183 - 0.209
2020	0.173	0.146 - 0.200
2021	0.239	0.206 - 0.272
2022	0.109	0.039 - 0.178
2023	0.162	0.145 - 0.178

<sup>1</sup> Confidence Intervals (CIs). Values indicate the range in which 95% of samples fall.

### 3.4 MARINE WILDLIFE OBSERVATIONS – BAKER LAKE

When transporting equipment and fuel to Baker Lake for Meadowbank, deep-water vessels can enter Chesterfield Inlet, but must stop at Helicopter Island (Tikirraqjuaqkanngir&iq) at the west end of the Inlet. There, material or fuel is loaded aboard barges, and tugs move the barges through the narrow passage connecting Chesterfield Inlet to Baker Lake, and then on to the hamlet of Baker Lake.

To satisfy NIRB Project Certificate No. 004 Term and Condition 36, Agnico Eagle’s Meadowbank Complex is required to engage a local area marine wildlife monitor onboard all vessels transporting fuel or materials for the Project on barge shipping between Helicopter Island and Baker Lake.

Community surveys have been conducted since 2008, apart from 2020 and 2021 due to health and safety restrictions in place related to the Covid-19 pandemic. Therefore, Groupe Desgagnés and Woodward had their MMSOs record sightings of marine mammals and seabirds when possible while travelling on the barge during those two years. The vessel companies continued to conduct surveys on the barges in 2023; survey effort and results from these surveys are included in Sections 3.2 and 3.3 and summarized in Section 3.4.1. Agnico Eagle remains committed to meet compliance with Project Certificate No.004 Term and Condition 36 and continues to seek out monitors from the Chesterfield Inlet when possible.

In 2023, incidental surveys were conducted over 27 days by local wildlife monitors between Helicopter Island and Baker Lake in July, August, and October, all but seven of which had GPS

coordinates to plot their locations (see Figure 3.4-1). Table 3.4-1 summarizes the incidental survey effort while on the barges between 2008 and 2023. During these surveys, there were 195 separate sightings of birds (total of 663 individuals), and an additional four incidental observations including one sighting of caribou (one individual), two sightings of muskox (13 individuals), and one sighting of an unknown seal species (one individual).

**TABLE 3.4-1 BARGE INCIDENTAL SURVEY EFFORT BY LOCAL WILDLIFE MONITORS BETWEEN HELICOPTER ISLAND AND BAKER LAKE, 2008 TO 2023<sup>1</sup>**

<b>Year</b>	<b>Survey Dates</b>	<b>Total Number of Days Surveyed</b>
2008*	July 28-31; August 2-5	8
2009	August 19-22; August 26-31; September 3-7	14
2010	October 18-27	10
2011	July 28-31; August 6-7	6
2012	August 6-7	2
2013	August 13-19; October 9-16	15
2014	October 6-10	5
2015	July 9-July 22; July 23-August 5; October 13-21	37
2016*	July 26-31; October 2-13	18
2017*	July; October	-
2018*	-	19 <sup>2</sup>
2019	September 19-24	6
2020	July 27-28; August 9-10; August 12; August 15; August 18	7
2021 <sup>3</sup>	July 28; October 5-6; October 10; October 18	5
2022	July 21-27; August 4-8; October 16-23	22
2023	July 28-August 9; August 18-19; October 7-19	27

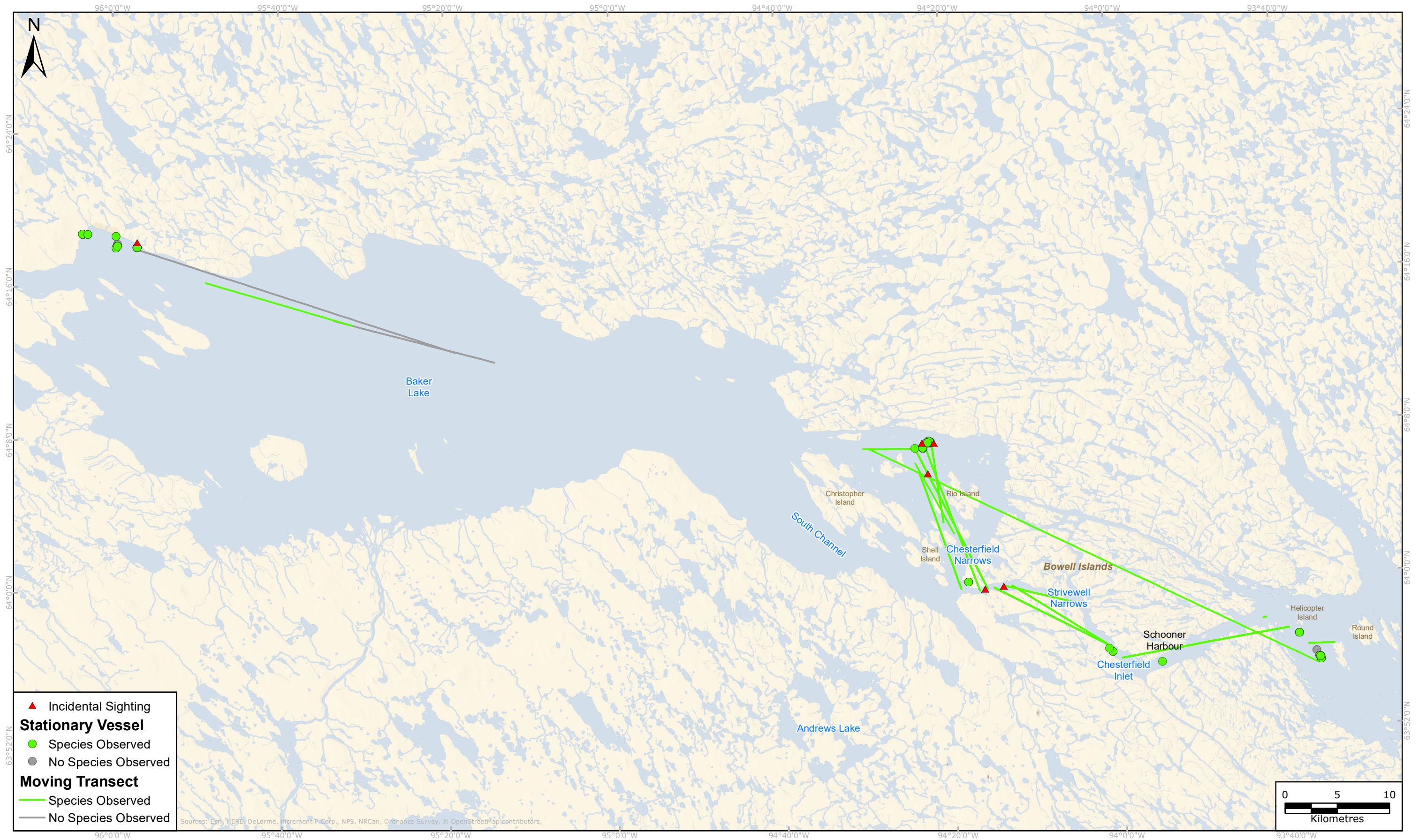
\* Indicates specific dates were not provided – either only months were provided, approximate dates, number of hours surveyed, or dates where observations occurred. A best estimate of number of days surveyed is therefore provided for these years (2008, 2016, 2017, 2018).

<sup>1</sup> During 2020 and 2021, surveys were conducted by Groupe Desgagnés and Woodward vessel crew members rather than community members.

<sup>2</sup> No dates were provided for 2018, however it was noted that 153 hours of surveys were completed. Therefore, it was assumed that surveys were conducted 8 hours per day, for a total of 19 survey days. But it is important to note that this is an estimate based on number of hours surveyed.

<sup>3</sup> All surveys conducted on the barge while travelling between Helicopter Island and Baker Lake were seabird survey transects; no marine mammal transects were completed on the barge in 2021.

FIGURE 3.4-1 WILDLIFE MONITORING SURVEYS BETWEEN HELICOPTER ISLAND AND BAKER LAKE, 2023



Tables 3.4-2 and 3.4-3 summarize marine mammal and seabird observations made by the local wildlife monitors onboard contractor vessels transporting fuel for the Meadowbank Mine between Helicopter Island and Baker Lake between 2008 and 2019 and from 2022 to 2023, and by Groupe Desgagnés and Woodward crew members in 2020 and 2021.

**TABLE 3.4-2 MARINE MAMMALS OBSERVED BY LOCAL WILDLIFE MONITORS ON BARGES BETWEEN HELICOPTER ISLAND AND BAKER LAKE, 2008 TO 2023<sup>1</sup>**

Year	Month	Number of Days Surveyed	Seals	Polar Bears <sup>2</sup>
2008	August	2	2	3
2008	July	1	-	-
2009	August	2	6	-
2009	September	1	2	-
2010	October	1	1	-
2020	August	4	1	-
2021	July	NA <sup>3</sup>	-	-
2022 <sup>4</sup>	August	34	-	-
2022 <sup>4</sup>	September	16	-	-
2022 <sup>4</sup>	October	4	-	-
2023	July	4	-	-
2023	August	11	1	-
2023	October	12	-	-

<sup>1</sup> Marine mammals were only observed during wildlife monitoring surveys on the barge in 2008, 2009, 2010, and 2020. No other marine mammals were recorded during surveys between 2011 and 2019. During 2020 and 2021, surveys were conducted by Groupe Desgagnés and/or Woodward vessel crew members rather than community members.

<sup>2</sup> Species listed as Special Concern on Schedule 1 of the federal Species at Risk Act (SARA).

<sup>3</sup> No surveys were conducted on the barge travelling between Helicopter Island and Baker Lake in 2021 due to crew requirements and the majority of transits occurring during dark hours; however, 25 stationary surveys for marine mammals were conducted while the vessel was at anchor at Helicopter Island, but these results are presented in Section 3.2.2 of the report and not summarized in this table.

<sup>4</sup> Groupe Desgagnés and Woodward vessel crew member survey effort and observations between Helicopter Island and Baker Lake are not included in this table but are included in Section 3.2 and summarized in Section 3.4.1.

**TABLE 3.4-3 SEABIRDS OBSERVED BY LOCAL WILDLIFE MONITORS ON BARGES BETWEEN HELICOPTER ISLAND AND BAKER LAKE, 2008 TO 2023**

Year	Month	Number of Surveys	Gulls/Terns	Loons	Snow Geese	Waterfowl	Other Seabird	Eagle/Falcon	Unknown Birds and Other
2008	July	1	-	1	-	-	-	-	-
2008	August	2	1+*	1	-	-	-	-	-
2009	August	2	1+	-	1+	1+	-	3	-
2009	September	1	1+	3	1,000+	5	-	1	-
2010	October	1	-	-	-	-	-	-	-
2011	July	1	-	-	-	2	-	-	-
2011	August	1	1+	-	-	-	-	-	-
2012	August	1	24	-	-	-	-	-	-
2013	August	2	10+	1	15+	-	-	-	10+
2013	October	1	6	-	12	-	-	-	2
2014	October	1	-	-	-	-	-	-	-
2015	July	1	-	2+	-	-	-	-	-
2015	August	1	-	-	-	-	-	-	-
2015	October	1	-	-	-	-	-	-	-
2016	July	1	14	-	-	-	-	-	2+
2016	October	1	32	1	-	-	-	-	53
2017	July	1	65	-	-	3	-	-	-
2018	August	1	-	-	-	-	-	-	-
2019	September	1	85	-	540	270	-	4	3
2020	July	2	1	-	-	2	-	-	-
2020	August	2	8	-	-	-	6 <sup>1</sup>	-	-
2021	July	1	30	-	-	-	-	-	-
2021	October	8	14	-	-	24	-	-	28
2022	July	34	75	1	-	1	-	-	-
2022	August	16	33	-	-	-	-	-	4
2022	October	4	-	-	-	-	-	-	-
2023	July	1	28	2	-	-	-	-	-
2023	August	24	182	2	-	57	-	1	4
2023	October	71	122	-	-	-	-	5	260

"-" indicates none observed.

\* Number of individuals observed was often not recorded, just the species seen. In these cases, 1+ is entered in the table, as the number observed is unknown.

<sup>1</sup> Includes northern fulmar, petrel, cormorant, and jaeger.

### 3.4.1 GROUPE DESGAGNÉS AND WOODWARD OBSERVATIONS – BAKER LAKE

In addition to community wildlife observers, the shipping companies continued to record marine wildlife sightings while vessels were at anchor near Helicopter Island, or on the tugs/barges between Helicopter Island and Baker Lake to supplement the community observer effort. These results are presented in Sections 3.2 and 3.3 and summarized here.

In 2023, crew members onboard the tugs (Atlantic Beech and Atlantic Elm) recorded a total of 36 incidental sightings while transiting between Helicopter Island and Baker Lake over 35 separate days between July 13 and August 31. Two marine mammals were recorded incidentally in July (one harbour seal and one bearded seal), and a total of 265 seabirds were recorded across 13 different species. These results are included in Section 3.2 and 3.3.

In addition to the incidental sightings by the barges, vessels also completed stationary surveys while anchored at Helicopter Island and moving transect surveys when conditions allowed. In 2023 there were 42 stationary surveys for marine mammals completed at Helicopter Island (Figure 3.2-1). No marine mammals were observed during any of these surveys.

For seabirds, 94 stationary surveys were completed while anchored at Helicopter Island. Of these surveys, 93 had sufficient data to calculate temporal effort while 1 was missing either a survey start time, end time, or both. There was a total of 64.6 hours of survey time across those 94 surveys lasting an average of 0.7 hours per survey. The stationary surveys recorded a total of 792 individual seabirds across 10 different species (included in Section 3.3).

In addition to the stationary surveys, 17 moving transect surveys for seabirds were completed between Helicopter Island and Baker Lake. Of these 17 surveys 1 was conducted by the Kivalliq W. and 16 were conducted by the Tuvaq W. Of these surveys, all 17 had sufficient spatial data to calculate spatial effort. There was a total of 143.6 km of survey effort. During moving transect surveys, 282 individual seabirds of 11 different species were observed (included in Section 3.3).



## 4. CONCLUSIONS

Overall, survey effort and quality of data collected by the MMSOs has improved since 2019. Marine mammal survey effort in 2023 shows continued improvements since 2019. Attention to recording all data (i.e., positions and times) is required to ensure all survey effort is included in the summary of the surveys. It is likely that the enhanced training for vessel crew members over the last four years helped improve the number of surveys completed, as well as the quality of data collected. Seabird survey effort in 2023 illustrated increased understanding by the vessel captains and crew of the MMSO Program requirements of completing the five-minute interval surveys.

Agnico Eagle will continue to improve training for the vessel crew members in the following areas:

1. The training given to the vessel's crew MMSO will be reviewed every year to ensure all crew members are prepared for the shipping season.
2. The seabird surveys were primarily completed in six consecutive five-minute periods, repeated three times a day according to the ECSAS protocol. Updated datasheets from 2022 helped emphasize the correct data collection protocol in 2023. Training for the MMSOs will continue to focus on this aspect of the methodology again in 2024.
3. Incomplete data entry (i.e., data entry fields for survey effort left blank) continues to occur. In 2023, approximately 14% of marine mammal survey data were missing information such as start or end times, or positions. This is a decrease from early years of the program and similar to 2021 and 2022. For seabird surveys, roughly 9% of moving vessel surveys were missing spatial effort and 15% of stationary vessel surveys were missing temporal effort, which is a large improvement compared to 2022, when 40% of moving vessel surveys had been missing spatial effort and 70% of stationary vessel surveys were missing temporal effort. Although reporting of seabird survey effort has become more consistent in 2023 several surveys still lack the effort data required for statistical analysis. Agnico Eagle will continue to emphasize the importance of complete data collection and continue to encourage all MMSOs to complete the data entry fields.
4. Species identification while at sea can be challenging. Agnico Eagle has provided species identification sheets to the vessels since 2020, and additional aids (e.g., species identification posters) were provided for the 2023 shipping season. Agnico Eagle will continue to work with the shipping companies to provide relevant aids as needed.
5. The vessel's captain and crew will continue to be informed of specific mitigations to be used to manage interactions with marine mammals and birds.

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# APPENDIX A      SHIPPING MANAGEMENT PLAN SUMMARY BROCHURE – MEADOWBANK AND MELIADINE





AGNICO EAGLE

# SHIPPING MANAGEMENT PLAN

Meadowbank and Meliadine

# SHIPPING MANAGEMENT PLAN SUMMARY

This document summarizes the information found in the Agnico Eagle Shipping Management Plans for Meadowbank and Meliadine (Agnico Eagle 2022a; 2022b) into a single convenient package for review and as a reference document. It is expected that all bridge crew on all vessels supplying Meadowbank and Meliadine review this document and have it available on the bridge of the vessel while under way.

The Meadowbank division has implemented a vessel-based Marine Mammal and Seabird Observer (MMSO) program since 2010, and the Meliadine division since 2016. These programs will continue to be implemented during all routine project-shipping activities, in accordance with Meadowbank Mine NIRB Project Certificate No. 004 Condition 36 and Meliadine NIRB Project Certificate No. 008 Condition 40.



The NIRB conditions require Agnico Eagle to include in its contracts that ships must remain mindful of marine areas having a high density of marine mammals and birds. Agnico Eagle's NIRB Project Certificates include conditions to ensure the mitigation measures and monitoring programs outlined in this summary document are conducted by shipping companies; thus, shipping companies are required to review and become familiar with the information summarized in this document.

## GENERAL GUIDELINES FOR OPERATION OF VESSELS

The Shipping Management Plans include Mitigation, Management, Monitoring and Reporting requirements:

**1. Mitigation:** Standard operation of the vessel.

Avoidance of seabird colonies and marine mammal haul-outs on shore

Vessel operation – maintain straight course, constant speed, avoid erratic behaviour

**2. Management:** What to do when you see a marine mammal or seabird.

Avoidance of marine mammals and seabirds on the water

What to do if a marine mammal approaches the vessel

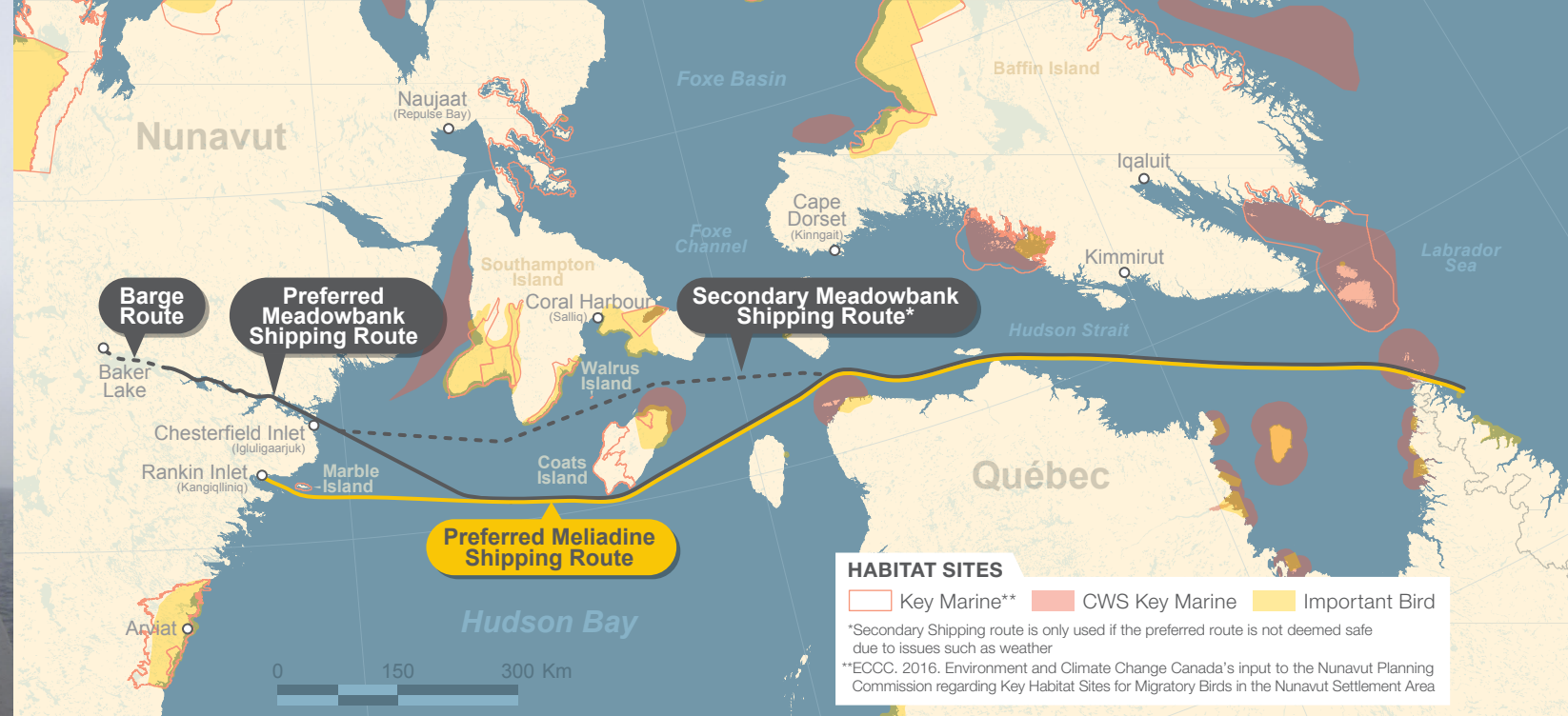
**3. Monitoring:** The Marine Mammal and Seabird Observation Program.

Monitoring for marine mammals and seabirds

**4. Reporting:** Monitoring data sent to Agnico Eagle. How to report collisions or incidents to Agnico Eagle and the government.

Monitoring data sent to Agnico Eagle

What to do if there is a collision with a marine mammal



Ship captains and crew should review the following mitigation measures and be familiar with guidelines around marine mammals and seabirds, as well as navigational options for vessel maneuvers when encountering marine mammals and seabirds. Mitigation and management measures are summarized from the Shipping Management Plans for Meadowbank and Meliadine.

1. General navigational requirements while travelling through Hudson Strait to Helicopter Island or Rankin Inlet, include the following:

- a. Ships will, when possible, maintain a straight course and constant speed, and avoid erratic behaviour;
- b. Marine mammals will be given right of way as safe navigation allows;
- c. The ship will not be operated in such a way as to separate an individual member(s) of a group of marine mammals from other members of the group;
- d. Ships will maintain the required setback distances around marine mammals and seabirds on land;

**Avoiding Marine Mammals and Seabird Colonies on Land**

Maintain a setback distance of >500 m from colonies of seabirds and marine mammals on shore



**Avoiding Marine Mammals on Sea Ice**

Do not approach within 300 m of a walrus or polar bear observed on sea ice



- e. Ships will use a routing south of Coats Island as the primary shipping route;
- f. Ships travelling for the Meliadine project will remain at least 2 km from Marble Island to avoid disturbing seals, walrus and marine birds that might be in the vicinity; and

g. Ships will maintain the required setback distances around marine mammals and seabirds in the water.

**General Guidance on the Water**

Vessels maintain > 500 meters from aggregations of seabirds and marine mammals on the water\*



**Whales Always Have Right-of-Way**

**Vessel Operation:** Maintain straight course, constant speed, avoid erratic behavior

As per **Marine Mammal Regulations s.7(3)**, maintain a minimum of 100 m from marine mammals at all times

**What to do if a Marine Mammal Approaches the Vessel**

**Option 1**

Reduce its speed and, if possible, cautiously move away from the animal

**Option 2**

If it is not possible for the ship to move away from or detour around a stationary marine mammal or group of marine mammals, the ship will reduce its speed and wait until the animal(s) move to the side and remain 100 m to 500 m (Meadowbank) from the ship prior to resuming speed

**Option 3**

If animals appear to be trapped or disturbed by ship movements, the ship will mitigate disturbance (e.g., stoppage of movement) until the animal(s) has moved away from the immediate area

**\* The two projects have slightly different guidance on setbacks:**

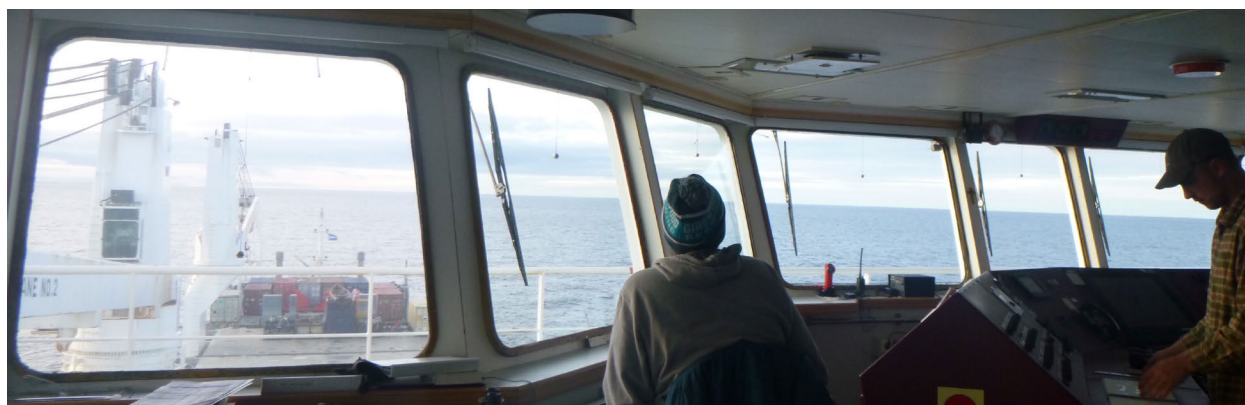
Meadowbank – Maintain 500 m away from feeding marine mammals and aggregations of seabirds and marine mammals  
 Meliadine – Maintain 300 m from feeding marine mammals.  
 Meliadine – Maintain 100 m away at all times.

- 2. As part of shipping companies' standard operating procedures, ship crews will monitor for marine mammals and seabirds from Hudson Strait to the lightering point near Helicopter Island (Meadowbank) or Rankin Inlet (Meliadine).
- 3. The ship's Master will be notified if there is a concern of the ship striking a marine mammal.
- 4. Ship personnel will make a decision if actions are required to avoid a possible collision by implementing management measures, if safe to do so.
- 5. If a collision occurs, the appropriate people will be contact and the incident will be documented.

# MARINE MAMMAL MANAGEMENT AND MONITORING PROGRAM

The Marine Mammal Management and Monitoring Plan (MMMMP) was developed for the Project to meet commitments made during the Nunavut Impact Review Board (NIRB) hearings related to Marine Shipping. The MMMMP was designed to provide protocols for conducting a vessel-based Marine Mammal and Seabird Observer (MMSO) program during all routine shipping activities along the shipping route.

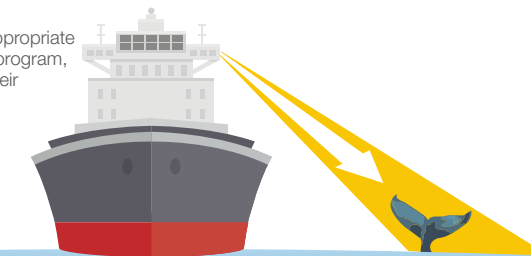
A Marine Mammal and Seabird Observer (MMSO) will be assigned by the captain prior to departure. The role of the MMSO is to record and report on marine mammals and seabird sightings during shipping activities along the shipping routes, and to advise the ship's crew on the location of observed marine mammals and if any action is recommended based on mitigation measures. MMSO and other crew members are also encouraged to collect incidental sightings (i.e., observations of marine mammals or seabirds NOT during dedicated monitoring) during their voyage and to report it to Agnico Eagle in addition to the MMSO data. Standard monitoring and data collection protocols for marine mammals and seabirds will be provided to the crew in the form of Standard Operating Procedures (SOPs) and in-person or online training.



## THE MARINE MAMMAL AND SEABIRD OBSERVATION (MMSO) PROGRAM

1. Ship crews (the assigned MMSO) will monitor for marine mammals and seabirds from Hudson Strait to the lightering point near Helicopter Island (Meadowbank) or Rankin Inlet (Meliadine)
2. The ship's Master will be notified if there is a concern of the ship striking a marine mammal
3. Ship personnel will make a decision if actions are required to avoid a possible collision

\*It is the responsibility of captains to ensure that appropriate crew members have been trained on the MMSO program, conduct the MMSO while underway and report their findings to Agnico Eagle.



## HOW OFTEN DOES THE MMSO SURVEY?

**Marine Mammal Monitoring:** Conduct at least 1 dedicated survey per day, lasting 1.5 to 2 hrs beginning in Hudson Strait

### Seabird Monitoring:

- Conduct 1 to 3 dedicated surveys per day
- Each survey lasts 30 min, made up of **6 separate 5-min observation periods**, beginning in Hudson Strait

**Incidental Sightings:** While traveling from Hudson Strait to Rankin Inlet/Helicopter Island, look for marine mammals incidentally to avoid collisions and record incidental sightings



# REPORTING

Data collected by the MMSOs must be submitted annually by Agnico Eagle to the Government of Nunavut and other applicable regulators (e.g., Environment and Climate Change Canada (ECCC) - Canadian Wildlife Service (CWS)) regarding the location, behaviour, abundance, and species observed as well as any interactions with Project vessels during shipping activities along the shipping route. Therefore, data and ship tracks must be submitted to Agnico Eagle within 2-3 weeks of completion of the voyage.

## VESSEL OPERATORS REPORT THE FOLLOWING INFORMATION ANNUALLY TO AGNICO EAGLE

### Vessel Information:

- Name
- Dates of Transit
- Track log from Montreal to Agnico Eagle site
- General description of cargo

### Track Information:

- A GPS track of the vessel route

### MMSO Information:

- All data sheets collected by MMSO
- A record of any Management – avoidance of marine mammals or seabirds
- All incidental sightings of marine mammals or seabirds collected during the voyage (i.e., not during the dedicated MMSO surveys)

## IF A COLLISION OCCURS

### Report all collisions to Agnico Eagle:

Sara Savoie: Work: +1 (819) 759-3555 x 4603212 Cell: +1 (819) 856-9349  
 Robin Allard: Cell: +1 (819) 860-1414



### If a Marine Mammal and Vessel Collision Occurs Contact DFO:

Central and Arctic, Nunavut – Iqaluit: +1 (867) 979-8000



### Captain must report the following information (as per Marine Mammal Regulations s.39):

- Date, time and location of the incident;
- Species of marine mammal involved in the incident;
- Circumstances of the incident;
- Size and type of vehicle;
- Weather and sea conditions at the time of the incident;
- Observed state of the marine mammal after the incident; and
- Direction of travel of the marine mammal after the incident, to the extent that it can be determined.

### Agnico Eagle Contact:

[mmso@agnicoeagle.com](mailto:mmso@agnicoeagle.com)

### If a Seabird and Vessel Collision Occurs Contact:

ECCC Wildlife Enforcement: [ec.dalfnord-wednorth.ec@canada.ca](mailto:ec.dalfnord-wednorth.ec@canada.ca)







# REFERENCES

**Agnico Eagle (2022a).**

***Agnico Eagle- Meadowbank Division – Shipping Management Plan Version 4. Agnico Eagle.***

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***Agnico Eagle – Meliadine Division – Shipping Management Plan Version 9. Agnico Eagle.***

# APPENDIX B      MARINE MAMMAL MONITORING SOP





# Meadowbank and Meliadine Projects

## Marine Mammal Monitoring

STANDARD OPERATING PROCEDURE

SHIP-01

June 14 2023

Version B.4

**Scope of Work:** This SOP provides guidance for marine mammal monitoring procedures for shipping companies contracted by Agnico Eagle. Monitoring is conducted to avoid potential effects to marine mammals. The shipping companies are required to record marine mammal observations based on the protocols outlined in this SOP along the shipping route between Hudson Strait and Helicopter Island/Rankin Inlet.

**Contacts:** **Agnico Eagle**  
mmso@agnicoeagle.com

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- ATTACHMENT B MARINE SHIPPING MITIGATION SUMMARY
- ATTACHMENT C MARINE MAMMAL ID GUIDES
- ATTACHMENT D MMSO INCIDENT REPORT FORM
- ATTACHMENT E INCIDENTAL MARINE WILDLIFE SIGHTINGS FORM



## 1. PROGRAM DESCRIPTION AND OBJECTIVES

A Marine Mammal Monitoring Standard Operating Procedure (SOP) has been developed to guide onboard monitoring for marine mammals. This SOP satisfies the Meadowbank Mine NIRB Project Certificate No. 008 Condition 40 and the Meliadine NIRB Project Certificate No.006 Condition 82.

The purpose of this SOP is to identify the monitoring procedures for shipping companies contracted by Agnico Eagle to avoid potential effects to marine mammals. This document outlines the following:

- how to avoid or adjust shipping speed near sensitive wildlife habitat along shipping routes;
- how to record observations of marine mammals, which includes whales, pinnipeds (i.e., seals and walruses), and polar bears;
- potential mitigation if marine mammals are observed;
- how to record and report mitigation measures taken, if applicable; and
- how to record and report ship strikes of marine mammals if they occur.

Agnico Eagle will update this SOP as necessary, in response to feedback from the Department of Fisheries and Oceans (DFO), Environment and Climate Change Canada (ECCC) or in response to data collected in the field or scientific advances.

## 2. MARINE MAMMAL MONITORING

### 2.1 Overview

The following protocol will be implemented during the Marine Mammal and Seabird Observer (MMSO) program:

- A minimum of one assigned MMSO will be present on-board vessels during all transits;
- The MMSO will conduct marine mammal observations along the shipping route from the bridge during daylight hours and record sightings into the *Marine Mammal Sightings Form* (Attachment A); and
- The shipping contractor will initiate mitigation measures designed to minimize Project impacts on marine mammals, as identified in the Marine Shipping Mitigation Summary Booklet and summarized in Attachment B.

### 2.2 Training

The captain is responsible to assign an MMSO to the bridge, and to ensure that the MMSO has been trained to identify marine mammals and seabirds.

Training for the assigned MMSOs includes:

- The pre-trip training live webinar, or review of the recorded webinar prior to beginning the MMSO duties. The recorded webinar will also be available on the ship for review as needed;
- Review the Marine Mammal Monitoring SOP (this document), the Marine Shipping Mitigation Summary Booklet, and the Seabird Monitoring SOP (SOP # SHIP-02);
- Review marine mammal identification, including common species provided in Attachment C (Whale ID Guide and Pinniped ID Guide);
- Know how to estimate distances to animals observed; and

- Review how to fill out the *Marine Mammal Sightings Form* (Attachment A) and the *Marine Mammal and Seabird Observer (MMSO) Incident Report Form* (Attachment D).

## 2.3 Equipment

Bridge staff participating in wildlife monitoring will require the following when conducting surveys:

1. This SOP;
2. Whale ID Guide and Pinniped ID Guide (Attachment C);
3. *Marine Mammal Sightings Form* (Attachment A);
4. *MMSO Incident Report Form* (Attachment D);
5. Binoculars;
6. GPS (only required if unable to get GPS coordinates from the ship); and
7. Clipboard and pencil.

## 2.4 Marine Mammal Monitoring Methods

Marine mammal surveys are required along the shipping route from Hudson Strait to Helicopter Island/Rankin Inlet, and during the return journey from Helicopter Island/Rankin Inlet through Hudson Strait (Figure 2.4-1). Surveys must be conducted at least once per day, but two surveys per day is preferred.

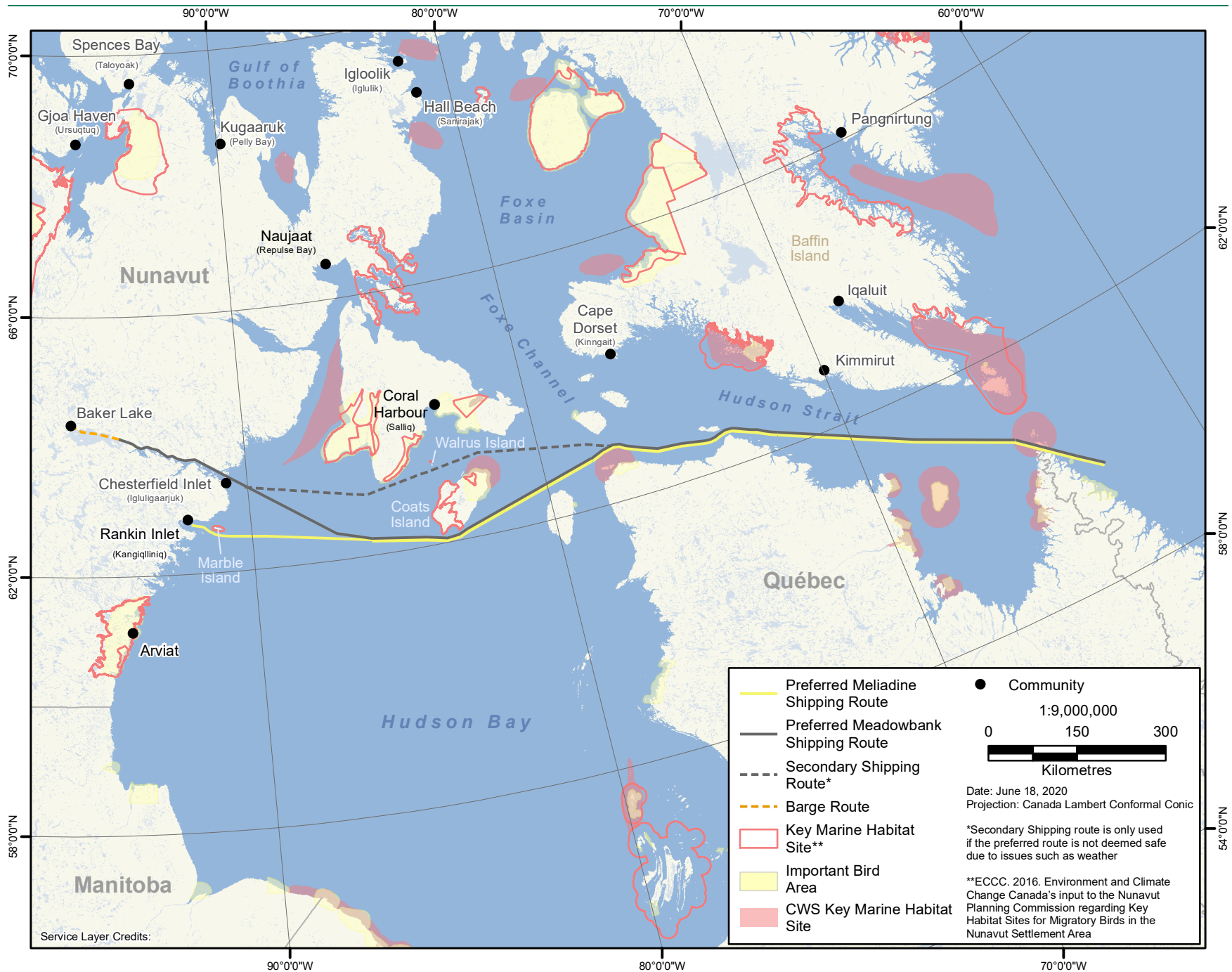
General environmental and marine mammal sightings information is to be collected and recorded by filling out the form in Attachment A. The protocol outlined in this section are best conducted along a transect line, therefore, it is best to start a marine mammal observation period when the vessel is and will be moving in a straight line for an extended period of time.

### 2.4.1 Observation Period

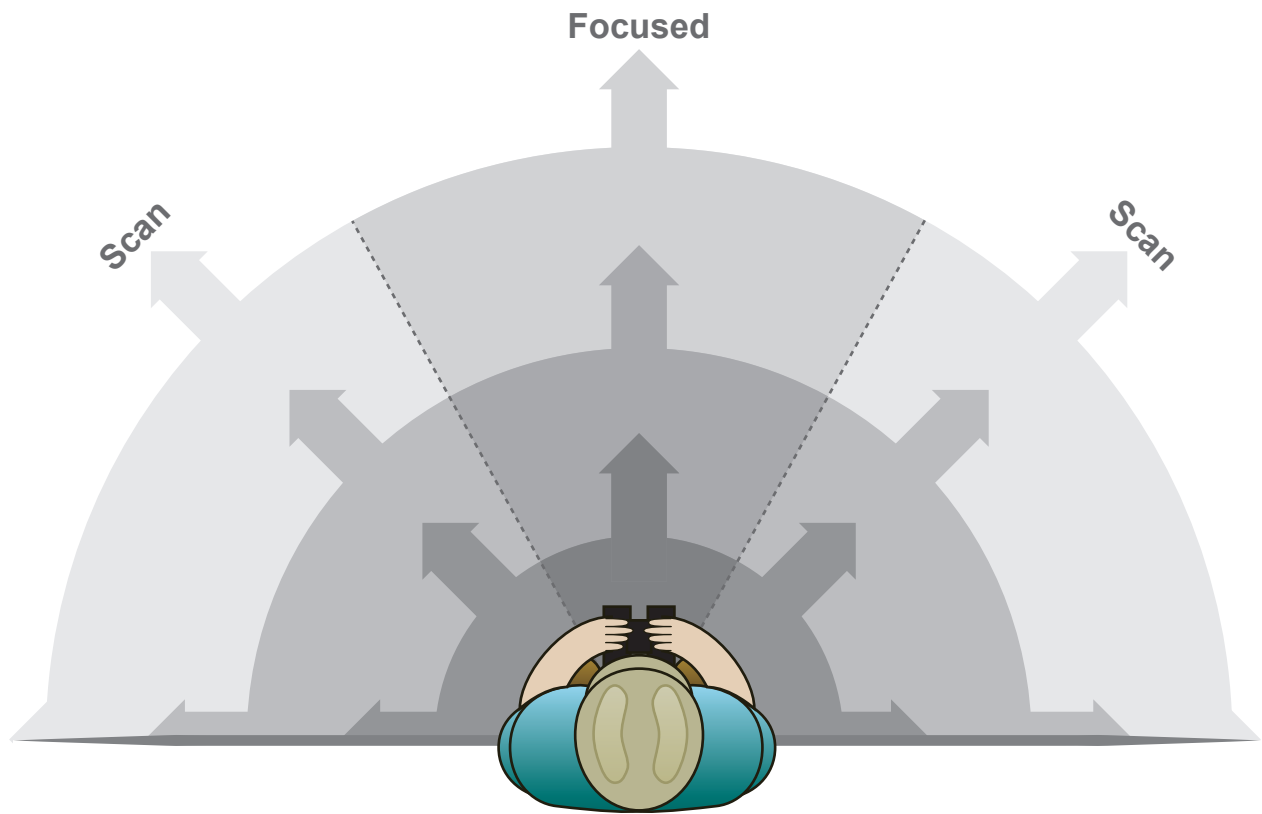
- Marine mammal monitoring is required from Hudson Strait to Helicopter Island (Meadowbank) or Rankin Inlet (Meliadine), along the shipping route presented in Figure 2.4-1.
- Conduct a minimum of 1 survey per day; however, 2 surveys per day is preferred when timing allows.
- Prioritize conducting surveys around Coats Island, Hudson Strait, and/or approaching Helicopter Island/Rankin Inlet.
- MMSO observation periods should last approximately 1.5 hours, but should not last longer than 2 hours to mitigate observer fatigue and eyestrain.
- During dedicated surveys, sightings are only recorded by the MMSO, with no assistance permitted by other crew members.
- For each observation period, document information on the ship's location, travelling speed and direction, environmental conditions on a *Marine Mammal Sightings Form*.

### 2.4.2 Observer Position

- Observations will be done from a high location on the vessel and ideally outdoors if possible and will be conducted at the same location each time.
- For marine mammal observations, depending on the weather conditions and safety requirements for the crew, the MMSO will position themselves in the middle of the ship at the front (bow) to observe marine mammals on both the starboard and the port side (Figure 2.4-2).



**Figure 2.4-1: Shipping Routes during the Open Water Season**



MMSO will record observations of marine mammals noted within a 180° viewing area (port to starboard) out to the horizon

**Figure 2.4-2: Illustration of MMSO Position and Observation Field on a Vessel**

### 2.4.3 Scan Routine

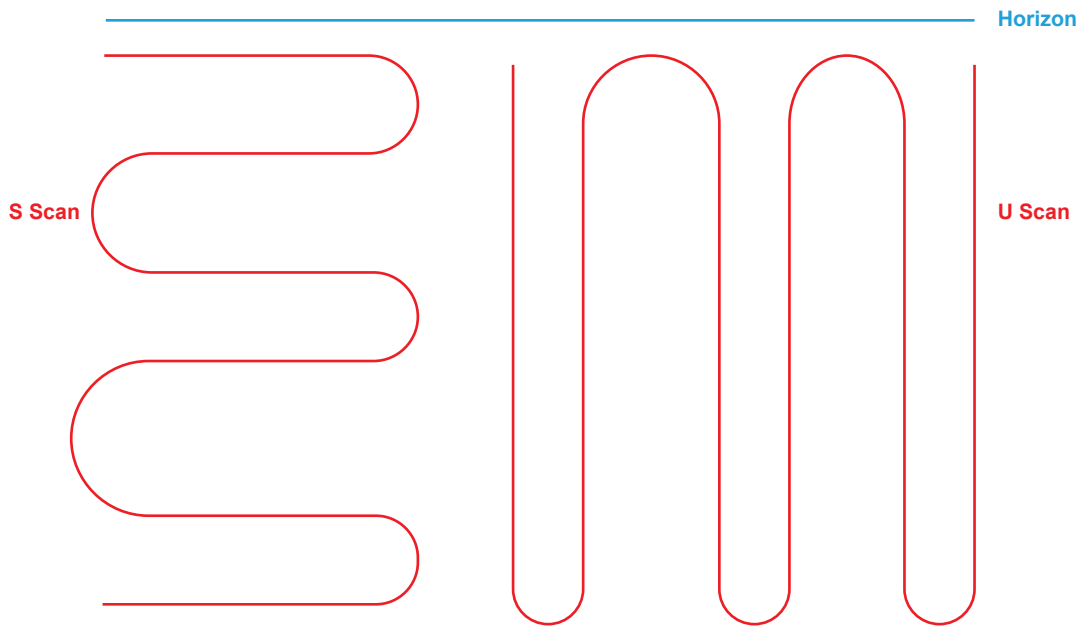
#### 1. How to Scan for Marine Mammals

- Scan the water from the vessel out to the horizon with the naked eye and use binoculars only to focus on possible sightings.
- Scans should be made from the middle of the vessel and cover the scan area shown in Figure 2.4-2 with a focus on the water ahead and to the side to the moving vessel (e.g., focused scan area in Figure 2.4-2).
- Perform S and U scans (Figure 2.4-3) of the observation field about every 20 seconds looking for whale cues (e.g., blow, back surfacing). The most important aspect of marine mammal observing is to constantly scan the observation field to capture animals that could be located in the peripheral view for brief moments (e.g., surfacing).
- If a whale or pinniped (seal or walrus) is observed, record the sighting on the *Marine Mammal Sightings Form*, as per instructions in Step 2 below.
- Surveys are prioritized when the vessel is moving; however, if the vessel is stationary (e.g., anchored) for a day or portion of a day, then a marine mammal survey will be required while anchored. If this is required, scans should be conducted over the entire scan area in a uniform fashion.

#### 2. What to Do When a Marine Mammal is Observed

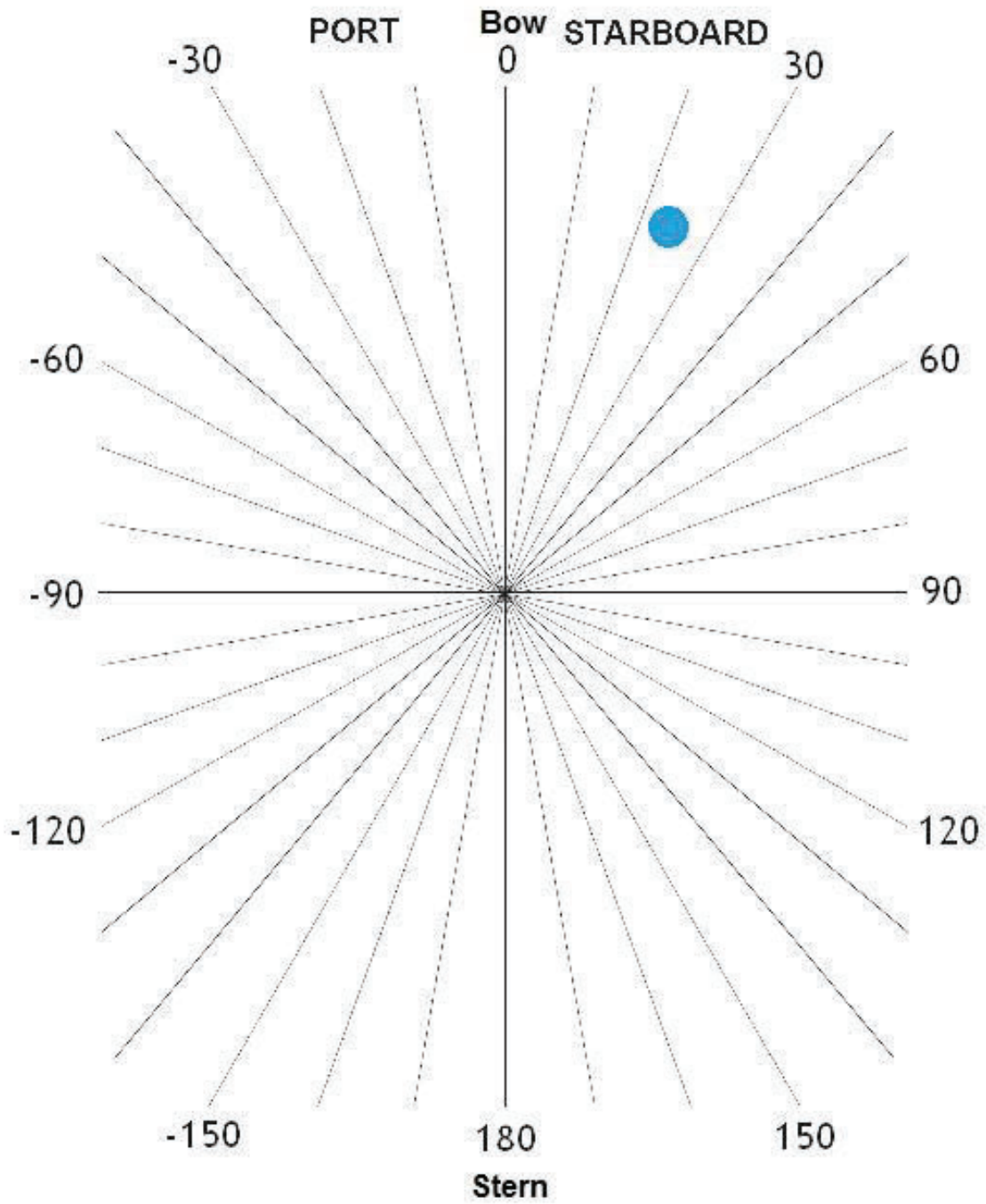
- Marine mammals observed during the dedicated marine mammal observational periods will be recorded on the *Marine Mammal Sightings Form*, including:
  - GPS location;
  - Distance to animal from vessel;
  - Angle to animal (Figure 2.4-4 shows how an angle to a marine mammal from the vessel should be estimated);
  - Number of marine mammal individuals;
  - Unknown species – if a species is unknown or if a blow is the only detection of the animal observed, then mark the sighting as unknown or record the general species group (e.g., whale, seal, walrus, polar bear), and provide a description of what was seen (e.g., colour of animal, how many were observed, behaviour, dorsal fin present or absent, etc.); and
  - Behaviour (e.g., travelling, feeding, other).
- Marine mammals in large groups that are close together should be marked as a single sighting.
- Sightings of pinnipeds (seals, walrus) hauled-out on land or of a polar bear on land will be recorded with a description in the “Notes” section indicating the animal(s) were observed on land.
- If a marine mammal is counted twice or more in the sightings record, then a note of a re-sighting should be marked.
- When possible, take photographs of marine mammal sightings and record the photo name/number alongside sightings records. These photos must be provided to Agnico Eagle along with the completed datasheets.
- If no marine mammals are observed during a survey period, then the top sections of the *Marine Mammal Sightings Form* must still be completed (including “General Information”, “Vessel Information”, and “Environmental Information”) with “No animals observed” entered into the “Notes” section.
- If a marine mammal sighting is close to the vessel and requires mitigation measures, or if a ship strike occurs, refer to Section 3 of this SOP and complete the *MMSO Incident Report Form* (Attachment D);
- Ensure no cell on the *Marine Mammal Sightings Form* is left blank.





Source: Agnico Eagle 2020.

**Figure 2.4-3: Illustration Showing How to Conduct S & U Scanning Techniques**



Note: Example shows angle to the animal (blue dot) is approximately 22°.

Source: Agnico Eagle 2020.

**Figure 2.4-4: How to Determine Angle to Marine Mammal**

## 2.5 Incidental Marine Mammal Sightings – “Off Effort”

During sailing from Hudson Strait to Helicopter Island/Rankin Inlet, the ship’s crew is required to keep watch for marine mammals along the shipping route. This is not part of the MMSO dedicated surveys. Whenever a marine mammal is observed outside of the dedicated survey time, this is called an incidental sighting, or “off-effort”. These sightings are recorded on the *Incidental Marine Wildlife Sightings Form* (Attachment E) and provided to Agnico Eagle for reporting. This includes all sightings of whales, seals, walruses, polar bears, and hauled-out animals.

If an incidental sighting is close to the vessel and requires mitigation measures, or if a ship strike occurs, refer to Section 3 of this SOP and complete the *MMSO Incident Report Form* (Attachment D).

## 3. MITIGATION AND REPORTING

In the event bridge crew observe marine mammals within 100 m of the vessel for Meliadine, and 500 m of the vessel for Meadowbank, refer to the Marine Shipping Mitigation Summary Booklet for recommended responses (e.g., slowing vessel, change direction). Management responses will be documented on the *Marine Mammal Sightings Form* for that observation. In addition, if a ship strike occurred or other incident (e.g., animal appears affected by the vessel), the MMSO must also fill in the *MMSO Incident Report Form* (Attachment D). Mitigation measures are also summarized in Attachment B.

If bridge crew determine a ship strike of a marine mammal has occurred, complete the *Marine Mammal Sightings Form* and indicate that the observation was the result of a ship strike. If the ship strike is a marine mammal the ship’s captain is to report the strike to Agnico Eagle (contact listed at the top of this SOP) as soon as practical and within 24 hours.

In addition, as per *Marine Mammal Regulations* s.39, the captain must also report a strike to the DFO minister, including the following information:

- the date, time and location of the incident;
- the species of marine mammal involved in the incident;
- the circumstances of the incident;
- the size and type of vehicle and, if applicable, the type of fishing gear involved in the incident;
- the weather and sea conditions at the time of the incident;
- the observed state of the marine mammal after the incident; and
- the direction of travel of the marine mammal after the incident, to the extent that it can be determined.

### DFO Contact Information:

- Central and Arctic, Nunavut – Iqaluit: 1-867-979-8000.

## 4. END OF TRIP REPORTING REQUIREMENTS

The following information will be submitted to the Agnico Eagle Environment Team (contact information provided at the top of this SOP) after each shipping trip for collation into a database:

1. Spatial file of the shipping route;
2. Completed *Marine Mammal Sightings Forms*;
3. Completed *MMSO Incident Report Forms* (if required); and
4. Photographs taken of sightings.

## 5. RECOMMENDED GUIDES

Reeves et al. 2002. *National Audubon Society's Guide to marine Mammals of the World*.

Additional Recommended Training/Practice: <http://www.dfo-mpo.gc.ca/species-especes/mammals-mammiferes/identification-guide/index-eng.html>.

## **ATTACHMENT A MARINE MAMMAL SIGHTINGS FORM**



## **ATTACHMENT B MARINE SHIPPING MITIGATION SUMMARY**

## General Guidance on the Water

Vessels maintain > 500 meters from aggregations of seabirds and marine mammals on the water\*



## Whales Always Have Right-of-Way

**Vessel Operation:** Maintain straight course, constant speed, avoid erratic behavior

As per **Marine Mammal Regulations s.7(3)**, maintain a minimum of 100 m from marine mammals at all times

## What to do if a Marine Mammal Approaches the Vessel

### Option 1

Reduce its speed and, if possible, cautiously move away from the animal

### Option 2

if it is not possible for the ship to move away from or detour around a stationary marine mammal or group of marine mammals, the ship will reduce its speed and wait until the animal(s) move to the side and remain at least 100 m (Meliadine) or 500 m (Meadowbank)

### Option 3

If animals appear to be trapped or disturbed by ship movements, the ship will mitigate disturbance (e.g., stoppage of movement) until the animal(s) has moved away

### \* The two projects have slightly different guidance on setbacks:

Meadowbank – Maintain 500 m away from feeding marine mammals and aggregations of seabirds and marine mammals

Meliadine – Maintain 300 m from feeding marine mammals.

Meliadine – Maintain 100 m away at all times.



## **ATTACHMENT C MARINE MAMMAL ID GUIDES**

# COMMON WHALE ID GUIDE

## Narwhal

**Size:** 4 - 5 m

**Body:** Small head, stocky body, short/round flippers, tusk

**Dorsal Fin:** No

**Colour:** Mottled black and white, grey or brownish



## Beluga

**Size:** 4 - 5 m

**Body:** Stout body, small head, short, broad paddle-shaped flippers

**Dorsal Fin:** No

**Colour:** Adults white, calves brown/grey



## Bowhead Whale

**Size:** up to 19 m

**Body:** Large and rotund

**Dorsal Fin:** No

**Colour:** Black/brown, white lower jaw

**Blow:** Bushy V-shaped

**Fluke:** Shows fluke when diving



## Fin Whale

**Size:** up to 23m

**Body:** Streamlined and long

**Dorsal Fin:** hooked

**Colour:** Grey body, white lower jaw right-side only

**Blow:** Tall and straight

**Fluke:** Rarely shows fluke



## Orca/Killer Whale

**Size:** 7-9 m

**Body:** Long rounded body

**Dorsal Fin:** Tall dorsal fin

**Colour:** Black-and-white, saddle patch (grey area) behind dorsal fin, white underside



# COMMON PINNIPED ID GUIDE

## Walrus

**Size:** 2.5 - 3m

**Body:** large, blubbery, long tusks

**Head:** Large thick neck, dark mouth with whiskers

**Colour:** Dark brown



## Harbour Seal

**Size:** 2m

**Body:** Medium size, spindle shaped body

**Head:** like dog, heart-shaped snout

**Colour:** Blue-grey with dark spots/speckles



## Hooded Seal

**Size:** 2.5 m

**Body:** Large, robust

**Head:** Broad head short narrow snout, males of "hood" they inflate

**Colour:** Black head, silver/grey fur, dark patches



## Harp Seal

**Size:** 1.5 - 2 m

**Body:** Medium size, robust

**Head:** Small head, pointy snout

**Colour:** Light grey, harp-shaped black patch on back, black face



## Bearded Seal

**Size:** 2 - 2.5 m

**Body:** Large, robust

**Head:** Small head, short snout, long whiskers

**Colour:** Dark brown/grey with dark rings/spots



## **ATTACHMENT D MMSO INCIDENT REPORT FORM**

## Marine Mammals and Seabird Observer (MMSO) Incident Report

Project Information		
Client: <b>Agnico Eagle</b>	Date:	
Project Name (circle one): <i>Meadowbank</i> <i>Meliadine</i>	General Location:	
Vessel Contractor Information		
Vessel Contractor Name:	Site Supervisor or Captain:	
Vessel Name/Type:		
MMSO Name:		
General Weather Conditions (throughout the day):	Wind (knots):	
	Sea State:	
	Swell Height (m):	
	Temperature (°C):	
	Notes:	
Time Start/Time End MMSO Duties (HH:MM):	Start:	End:

### Mitigation Log\*

Time (UTC; HH:MM)	Was Mitigation Implemented?	Location		Rationale for Implementation
		Latitude (DD)	Longitude (DD)	

\*Fill in this section if vessel is required to route north of Coats Island due to safety concerns

### Record of Vessel-Animal Collisions/Interactions

Species	Number of Individuals	Time (HH:MM)	Location		Visibility (m)/ Sea State	Comments
			Latitude (DD)	Longitude (DD)		

### Summary of Issues and Recommendations/Actions

Date Noted	Issue	Recommendation/Action	Date Resolved	Comments


## **ATTACHMENT E INCIDENTAL MARINE WILDLIFE SIGHTINGS FORM**



**AGNICO EAGLE**

# Incidental Marine Wildlife Sightings Form

(1 form per observation; PLEASE PRINT; circle options provided in *italics* as appropriate)

General Information			
Vessel Name		Date	
Observer Name		Local Time (24 hr)	
Vessel Information			
Ship Speed (kt)		Ship Heading (compass)	
Latitude (decimal degrees)		Longitude (decimal degrees)	
Environmental Information			
Beaufort Wind Force		Visibility (km)	
Wind Direction			
Observation Information			
Species <sup>1</sup>		ID Reliability	<i>Positive / Probable / Maybe</i>
Distance from vessel when first seen (m)		How close did the animal get to the vessel (m)?	
Number of Individuals	<i>Best Estimate:</i> _____ <b>OR</b> <i>Maximum/Minimum:</i> _____		
Behaviour	Mammals:	<i>Swimming</i>	<i>Diving</i>
		<i>Dead</i>	<i>Resting on land</i>
	Birds:	<i>Flying</i>	<i>Feeding</i>
		<i>Resting on land</i>	<i>Resting on ocean surface</i>
	<i>Escape Ship - Flying</i>	<i>Escape Ship - Diving</i>	<i>Dead</i>
	Other (describe): _____		
Other notes (e.g., physical descriptions, distinctive behaviours, drawing)		Position & Travel Relative to Ship [draw arrow]	 <b>OR</b> Variable Travel Directions
Was this observation the result of a SHIP STRIKE?	Yes _____ No _____ <i>If yes, fill out "MMSO Incident Report"</i>		
Mitigation Action Taken			
	Yes	No	
If yes, describe mitigation actions (e.g., change in course or speed) and result (e.g., maintained a buffer of x metres from wildlife)	<b>ACTION:</b>  <b>RESULT:</b>		

<sup>1</sup> Refer to list of species in the ID Guides.

# APPENDIX C SEABIRD MONITORING SOP







# Meadowbank and Meliadine Projects

## Seabird Monitoring

STANDARD OPERATING PROCEDURE

SHIP-02

July 2023

Version C.2

**Scope of Work:**

This SOP provides guidance for seabird monitoring procedures for shipping companies contracted by Agnico Eagle. Monitoring is conducted to avoid potential effects to seabirds. The shipping companies are required to record seabird observations based on the protocols outlined in this SOP along the shipping route between Hudson Strait and Helicopter Island/Rankin Inlet.

**Contacts:**

**Agnico Eagle**  
mmso@agnicoeagle.com

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- ATTACHMENT A SEABIRD SIGHTINGS FORM
- ATTACHMENT B MMSO INCIDENT REPORT FORM
- ATTACHMENT C COMMON SEABIRD ID GUIDE
- ATTACHMENT D INCIDENTAL MARINE WILDLIFE SIGHTINGS FORM



## 1. PROGRAM DESCRIPTION AND OBJECTIVES

A Seabird Monitoring Standard Operating Procedure (SOP) has been developed to guide onboard monitoring for seabirds. This SOP satisfies the Meadowbank Mine NIRB Project Certificate No. 008 Condition 40 and the Meliadine NIRB Project Certificate No.006 Condition 82.

The purpose of this SOP is to identify the monitoring and mitigation procedures for shipping companies contracted by Agnico Eagle to avoid potential effects to seabirds, as per the Marine Mammal and Seabird Monitoring (MMSO) program. This document outlines the following:

- How to avoid or adjust shipping speed near sensitive wildlife habitat along shipping routes;
- How to record observations of seabirds;
- Potential mitigation if large groups of seabirds are observed;
- How to record and report mitigation measures taken, if applicable; and
- How to record and report ship strikes of seabirds, if they occur.

Agnico Eagle will update this SOP as necessary, in response to feedback from Environment and Climate Change Canada (ECCC) or in response to data collected in the field or scientific advances.

## 2. SEABIRD MONITORING

### 2.1 Overview

The following protocol will be implemented during the Marine Mammal and Seabird Observer (MMSO) program:

- A minimum of one assigned MMSO will be present on-board vessels during all transits;
- The MMSO will conduct seabird observations along the shipping route from the bridge during daylight hours and record sightings into the *Seabird Sightings Form* (Attachment A); and
- The shipping contractor will initiate mitigation measures designed to minimize Project impacts on seabirds, as identified in the Marine Shipping Mitigation Summary Booklet (e.g., remain 500 m from bird colonies on land, remain 2 km from Marble Island, remain 500 m from large aggregations of seabirds on water).

### 2.2 Training

The captain is responsible to assign an MMSO to the bridge, and to ensure that the MMSO has been trained to identify marine mammals and seabirds.

Training for the assigned MMSOs includes:

- The pre-trip training live webinar, or review of the recorded webinar prior to beginning the MMSO duties. The recorded webinar will also be available on the ship for review as needed;
- Review the Seabird Monitoring SOP (this document), the Marine Shipping Mitigation Summary Booklet, and the Marine Mammal Monitoring SOP (SOP #SHIP-01);
- Review how to fill out the *Seabird Sightings Form* (Attachment A) and the *Marine Mammal and Seabird Observer (MMSO) Incident Report Form* (Attachment B);
- Review seabird identification, including common species provided in Attachment C; and
- Know how to estimate distances to animals observed.

## 2.3 Equipment Checklist

Bridge staff participating in wildlife monitoring will require the following:

1. This SOP;
2. *Seabird Sightings Form* (Attachment A);
3. Seabird ID Guide (Attachment C);
4. *MMSO Incident Report Form* (Attachment B);
5. Binoculars;
6. GPS (only required if unable to get GPS coordinates from the ship); and
7. Clipboard and pencil.

## 2.4 Seabird Monitoring Methods

Seabird surveys are required along the shipping route from Hudson Strait to Helicopter Island/Rankin Inlet, and during the return journey from Helicopter Island/Rankin Inlet through Hudson Strait (Figure 2.4-1). Surveys must be conducted a minimum of once daily, but three times per day is preferred.

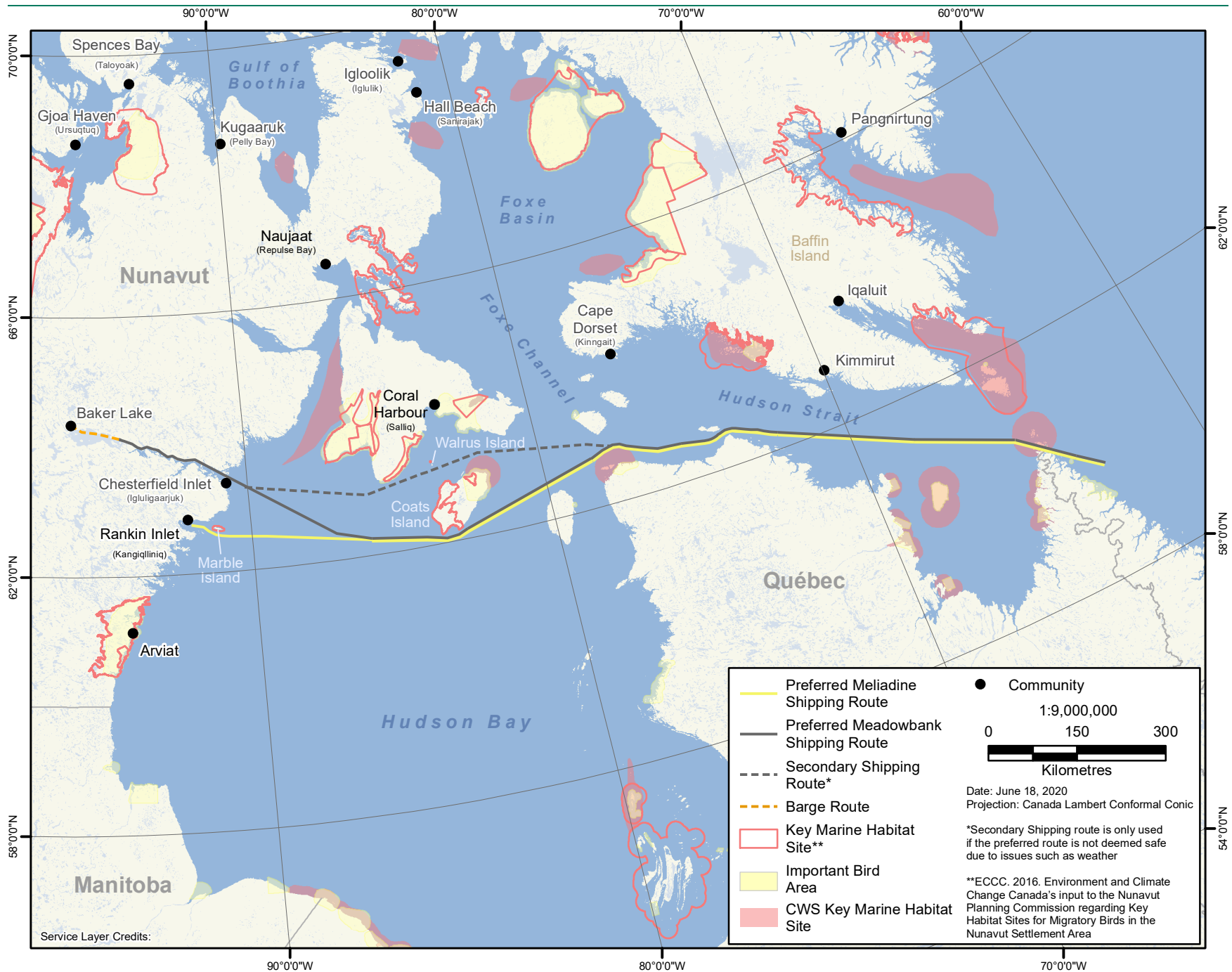
General environmental and seabird sightings information is to be collected and recorded by filling out the *Seabird Sightings Form* (Attachment A). The protocol outlined in this section are best conducted along a transect line, therefore, it is best to start a seabird observation period when the vessel is and will be moving in a straight line for an extended period of time.

### 2.4.1 Observation Period

- Seabird monitoring is required from Hudson Strait to Helicopter Island (Meadowbank) or Rankin Inlet (Meliadine), along the shipping route presented in Figure 2.4-1.
- Conduct three surveys per day, when possible: one morning, one afternoon, and one evening.
- Each seabird survey period will be conducted during **six consecutive five-minute periods** (total of 30 minutes each session). Take a short break at the end of each five-minute period to record the vessel's position and any conditions (ship speed, direction, weather, etc.) that may have changed since the last five-minute survey period.
- Each five-minute survey should be dedicated to surveying for seabirds only and should be completed regardless if birds are present or not.
- If possible, attempt to prioritize conducting surveys around Coats Island, when passing near the shore entering Hudson Bay, and/or approaching Helicopter Island/Rankin Inlet.
- If the vessel is moving (preferred), use methods in Section 2.4.3; if vessel is not moving (stationary), use the methods in Section 2.4.4 below.
- For each observation period, document information on the ship's location, travelling speed and direction, environmental conditions on a *Seabird Sightings Form* (one form per observation period).

### 2.4.2 Observer Position

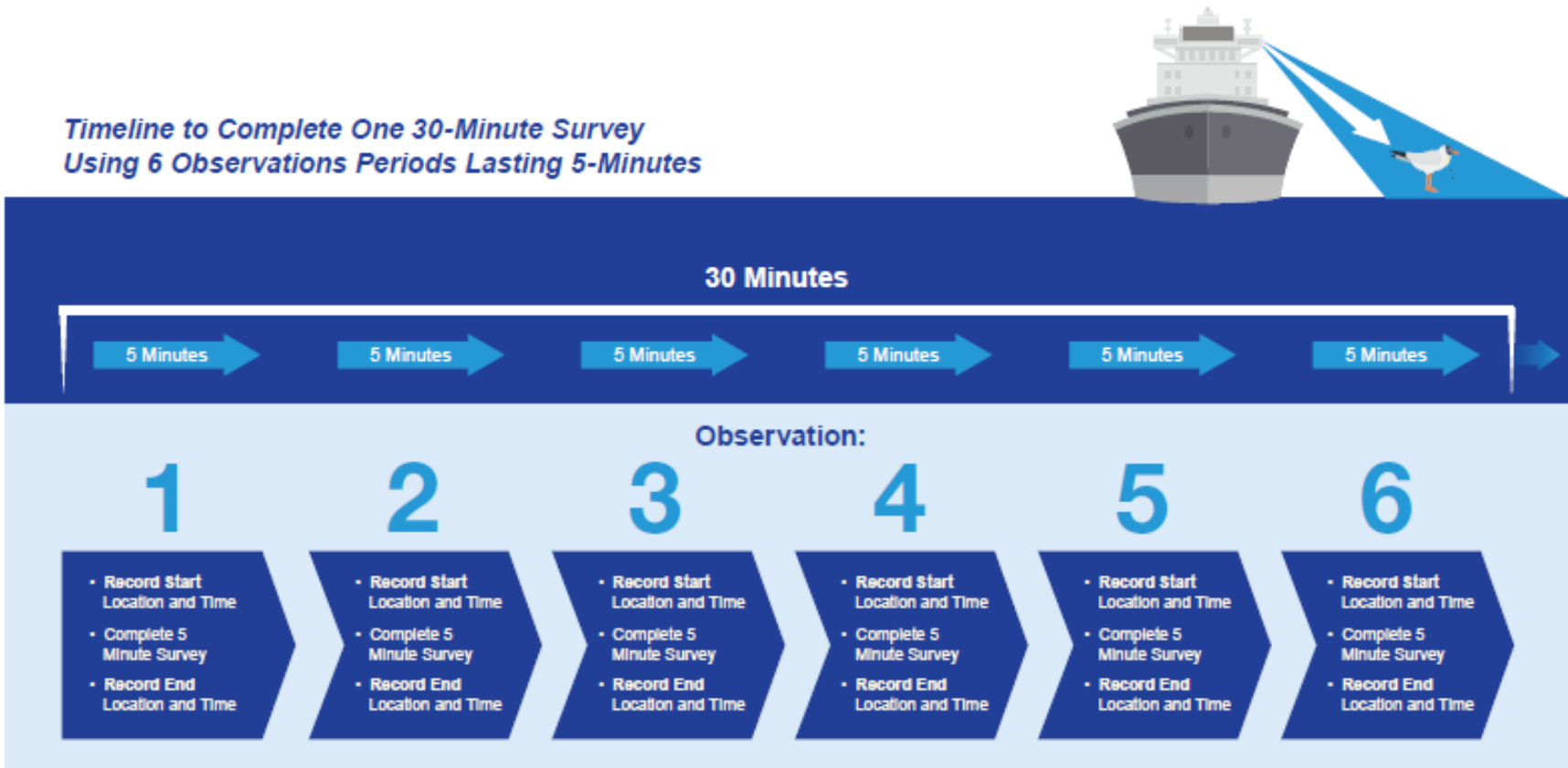
- Observations should be done from a high location on the vessel, when possible, at a location as close to the port or starboard edge of the platform as possible to increase the detection of seabirds.
- All surveys should be conducted at the same location each time.



**Figure 2.4-1: Shipping Routes during the Open Water Season**

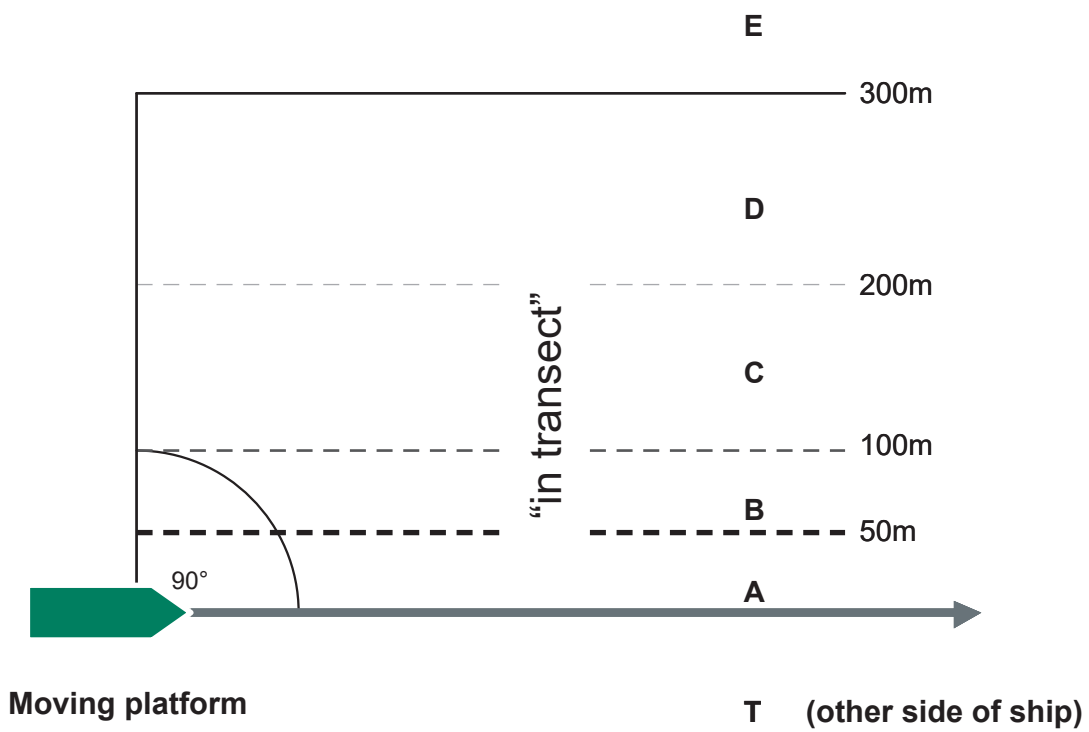
### 2.4.3 Survey Methods – Moving Vessel

- Conduct 1 to 3 dedicated surveys per day
- Each survey lasts 30 min, made up of **6 separate 5-min observation periods**, beginning in Hudson Strait (see Figure 2.4-2).
- Look forward from the side of the vessel, scanning at a 90° angle from either the port or starboard side depending where the observer is located.
- The transect width within which seabirds are recorded is 300 m from the side of the vessel (see Figure 2.4-3).
- Begin all five-minute surveys by conducting a snapshot survey of birds in flight – i.e., an initial count of all birds seen flying (Section 2.4.3.1).
- Scan ahead regularly (e.g., every minute) to spot birds that may dive as the vessel approaches.
- All birds observed within the 300 m transect, whether flying or on the water, or on sea ice or land, are recorded and are considered in-transect sightings. (Figure 2.4-3).
- Use Figure 2.4-3 (A to E, or T) to record the distance to each bird or flock of birds (to the center of the flock). Ensure to record birds/group of birds only once.
- Birds observed outside the 300 m transect are also recorded if this does not affect observations within the 300 m transect. Distance categories “E” and “T” in Figure 2.4-3 are both considered not in transect.
- Binoculars and spotting scopes can be used to confirm species identification and other details as necessary.
- When a survey period cannot be done because of poor visibility (i.e., when the entire width of the 300 m transect is not visible), the extent of visibility should be noted on the *Seabird Sightings Form*.
- If no birds are observed during a five-minute survey period, “no seabirds observed” must be noted in the “Notes” on the *Seabird Sightings Form*.
- For each observation period crew will document information on the ship’s location, travelling speed and direction, environmental conditions and the details of the wildlife observation (species, behaviour, distance from ship, etc.) on a *Seabird Sightings Form*.
- Attachment C (Common Seabird ID Guide) summarizes general species groups and individual species that are most likely to be observed and is meant to provide a cheat-sheet for only the most common species – other species may occur and Bird ID book can be used. Note that recording a general species group or “unknown species” with a description of the bird in the comments column is better than an incorrect species identification.
- When possible, take photographs of seabird sightings and record the photo name/number alongside sightings records. These photos must be provided to Agnico Eagle along with the completed datasheets
- Ensure no cell on the *Seabird Sightings Form* is left blank.



**Figure 2.4-2: Seabird Survey Methodology using Six Consecutive 5-Minute Observation Periods**

### Distance Categories



Extracted from Gjerdrum et al. 2012

**Figure 2.4-3: Average Proportion of Each Behaviour Type Observed Among at the Start of the Survey.**

### 2.4.3.1 Tips for Recording Birds

If the species of seabird cannot be identified, please ensure to indicate the species group (e.g., gull, puffin-like seabird) as described in the Common Seabird ID Guide (Attachment C), and provide a description of the bird in the comments column of the *Seabird Sightings Form*.

#### Birds on the Water

- All birds observed on the water are recorded throughout the five-minute survey period. If birds in the transect fly off the surface of the water as the vessel approaches, use binoculars to help count them, and record these birds as being on the water. Ensure not to record twice as flying birds during a snapshot survey.

#### Large Groups of Birds

- If it is not practical to estimate distance to each bird or flock of birds, record whether the birds were observed in or out of transect. If it is not practical to note which birds are on the water and which are in flight use the following guidelines:
  - If the majority of the birds are in the air, they can be recorded as flying.
  - If birds appear first on the water and then fly away as the vessel approached, or they continuously move between the water and air, recorded them being as on the water.

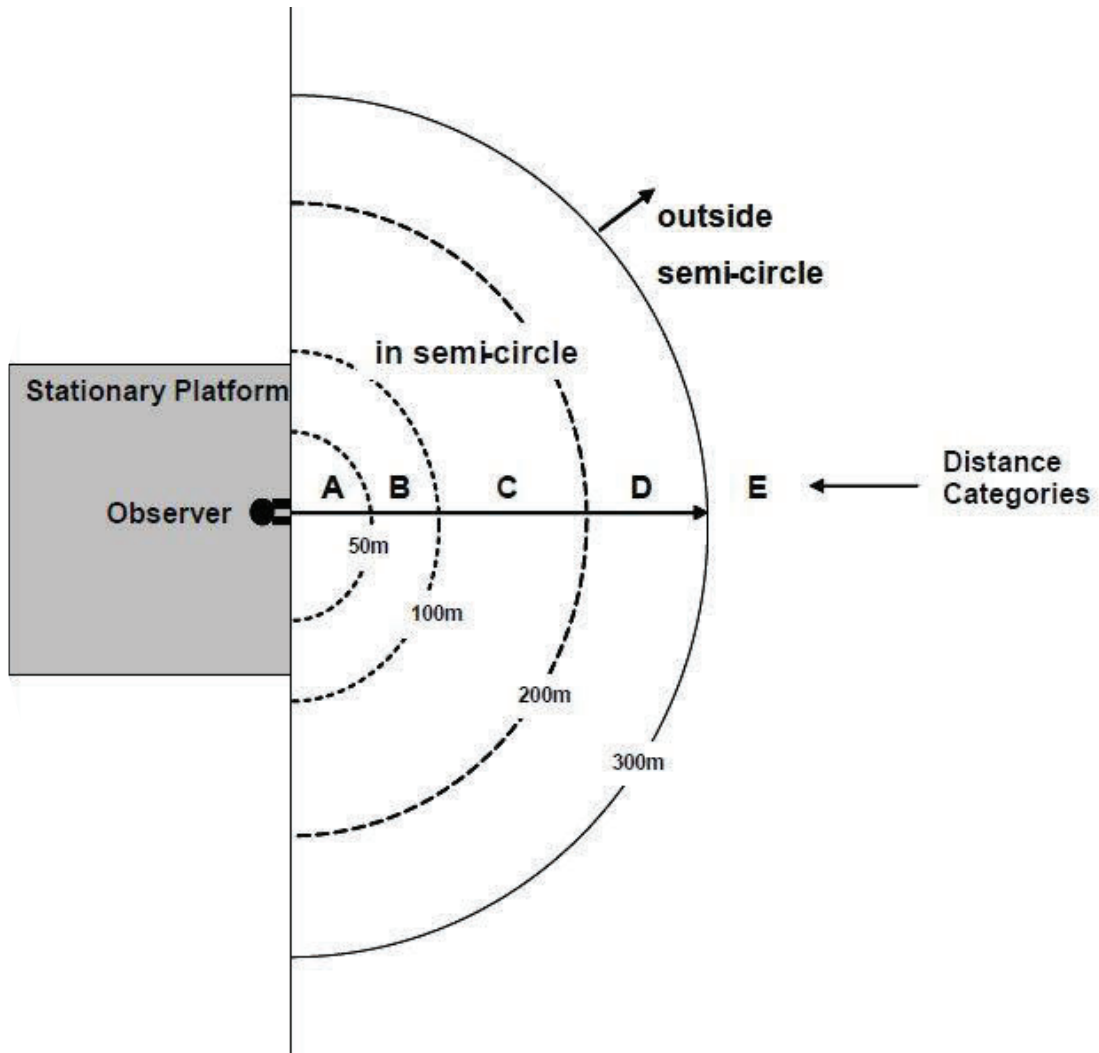
#### Birds that Follow the Vessel

- To avoid double counting birds, once a bird is recorded in-flight it is not subsequently recorded again if it follows the ship.

### 2.4.4 Survey Methods – Stationary Vessel

- If the vessel is stationary (e.g., anchored) for a day or portion of a day, then a seabird survey will be required while anchored to ensure the minimum of one survey per day is met.
- Surveys when the vessel is stationary are conducted from the bow (front) of the vessel.
- The length of each scan will depend on the number of birds present at the time of the scan (e.g., it may only last a few seconds if there are no birds present).
- Surveys while the vessel is stationary (e.g., on standby or anchored) are done using counts of birds within a 300 m “semi-circle” area from the vessel, scanning through a 180° arc (Figure 2.4-4).
- All seabirds on water and in flight that are observed within 300 m are recorded. If seabirds are visible beyond 300 m, they are recorded as outside of the 300 m semi-circle.
- The distance to seabirds (inside and outside the 300 m area) from the observer is estimated and recorded for all birds, using Figure 2.4-4 (A to E).
- Binoculars and spotting scopes can be used to confirm species identification and other details as necessary.
- If no birds are observed during the survey, “no seabirds observed” must be noted on the *Seabird Sightings Form*.





Source: extracted from Gjerdrum et al. 2012

**Figure 2.4-4: Seabird Survey Using an 180° Scan from the Bow, Surveying an Area 300 m from a Stationary Observer**

## 2.5 Incidental Seabird Sightings – “Off Effort”

During sailing between Hudson Strait and Helicopter Island/Rankin Inlet, the ship’s crew is required to keep watch for groups of seabirds along the shipping route. This is in addition to the MMSO dedicated surveys. Whenever a group of seabirds is observed outside of the dedicated survey time, this is called an incidental sighting, or “off-effort” sighting. These sightings are recorded on the *Incidental Marine Wildlife Sightings Form* (Attachment D) and provided to Agnico Eagle for reporting. This includes sightings of large groups of seabirds on water, colonies of seabirds on land, or large flocks of seabirds flying.

If an incidental sighting is close to the vessel and requires mitigation measures, or if a ship strike occurs, refer to Section 3 of this SOP and complete the *MMSO Incident Report Form* (Attachment B).

## 3. MITIGATION AND COLLISION REPORTING

In the event bridge crew observe large groups of seabirds requiring mitigation or management measures, recommended responses are outlined in Table 3-1. Mitigation responses will be documented on the *Seabird Sightings Form* in the “Comments” column for that observation.

**Table 3-1: Recommended Shipping Mitigation Responses for Seabirds**

Observation	Management Response
<b>Seabirds</b>	
Marble Island	2 km
Colonies and aggregations of seabirds (on water or land) during Project shipping transiting through Hudson Strait, Hudson Bay, and Chesterfield Inlet	500 m setback

If bridge crew determine a ship strike of a group of seabirds has occurred, they will complete the *MMSO Incident Report Form* (Attachment B), and indicate on the *Seabird Sightings Form* that the observation was the result of a ship strike. In the event of a suspected ship strike with birds on the water, the water will be scanned for any evidence of injured or deceased birds. In the event of a suspected ship strike with birds flying into the vessel, the MMSO will be tasked with immediately scanning the water and with undertaking a systematic walk-through to search the vessel deck for dead, stranded or injured birds.

In addition, as vessel strikes with marine birds often occur at night due to birds being attracted to vessel lights, the MMSO will also be tasked with undertaking opportunistic walk-throughs of the deck in the mornings. All birds found injured, stranded or dead on each vessel will be documented in accordance with the *Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada* (ECCC-CWS 2017) on the *Incident Report Form* (Attachment B).

All records of bird collisions will be provided to Canadian Wildlife Service (CWS) on a weekly basis, as vessel communications allow (i.e., as internet connections allow). Immediate reporting will be required in the event that multiple bird collisions occur (involving more than five individuals) and the incidents appear related (i.e., similar time period, location, and weather conditions). In this instance, the regional Environment and Climate Change Canada (ECCC) Wildlife Enforcement Officer (contact information provided below) will be contacted to provide advice on the implementation of adaptive management techniques to attempt to reduce the likelihood of collisions occurring in the future.

**If a seabird and vessel collision occurs, contact:**

- ECCC Wildlife Enforcement: [ec.dalfnord-wednorth.ec@canada.ca](mailto:ec.dalfnord-wednorth.ec@canada.ca)

## 4. END OF TRIP REPORTING REQUIREMENTS

The following information will be submitted to the Agnico Eagle Environment Team (contact information provided at the top of this SOP) after each shipping trip for collation into a database:

1. Spatial file of the shipping route;
2. Completed *Seabird Sightings Forms*;
3. Completed *MMSO Incident Report Form* (if required); and
4. Photographs taken of sightings.

## 5. REFERENCES AND RECOMMENDED GUIDES

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*. Revised May 2016. 140 pp.

Gjerdrum et al. 2012. *Eastern Canada Seabirds at Sea (ECSAS) Standardized Protocol for Pelagic Seabird Surveys from Moving and Stationary Platforms*.

Latour, P. B., J. Leger, J. E. Hines, M. L. Mallory, D. L. Mulders, H. G. Gilchrist, P. A. Smith, and D. L. Dickson. 2008. *Key Migratory Bird Terrestrial Habitat Sites in the Northwest Territories and Nunavut*. Canadian Wildlife Service Occasional Paper Number 114. Canadian Wildlife Service: Ottawa, ON.

Mallory, M. L. and A. J. Fontaine. 2004. *Key Marine Habitat Sites for Migratory Birds in Nunavut and the Northwest Territories*. Canadian Wildlife Service Occasional Paper Number 109. Canadian Wildlife Service: Ottawa, ON.

Sibley. 2016. *Field Guide to the Birds of Eastern North America: Second Edition*.

## **ATTACHMENT A SEABIRD SIGHTINGS FORM**

**Seabird Sightings Form** (circle options that are *italicized* as appropriate)

<b>Survey Type</b> (circle one):		<i>Moving Vessel</i>		<i>Stationary Vessel</i>		
<b>General Information</b>						
<b>Date (DD/MMM/YYYY)</b>		<b>Observer Name</b>		<b>Height of Eye (m)</b>		
<b>Vessel Information</b>						
<b>Company/Agency</b>		<b>Vessel Type</b>		<b>Vessel Heading</b>		
<b>Vessel Name</b>		<b>Vessel Activity</b>	<i>Moving</i> <i>Stationary</i>	<b>Vessel Speed (kt)</b>		
<b>Environmental Information</b>						
<b>Weather</b>	<i>Clear</i> <i>Partly Cloudy</i> <i>100% Cloud</i> <i>Fog</i> <i>Rain</i> <i>Snow</i>				<b>Sea State (0-9)</b>	
<b>Beaufort Wind Force</b>	<i>Calm</i> <i>Light Wind</i> <i>Strong Wind</i> <i>Gale Force Wind</i> <i>Stormy</i>				<b>Wave Height (m)</b>	
<b>Wind Direction (Deg)</b>		<b>Glare Conditions</b>	<i>None</i> <i>Slight</i> <i>Grey</i> <i>Bright</i>	<b>Visibility (km)</b>		
<b>Survey Information</b>						
<b>Observer Location</b>	<i>Outdoors</i>	<i>Indoors</i>	<b>Observation Side</b>	<i>Starboard</i>	<i>Port</i> <i>Bow</i>	
<b>Notes:</b>						

5-min Survey #1 of 6 Start		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance Zone (A,B,C,D,E)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/ non-breeding/molt)	Comments*
5-min Survey #1 of 6 End		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	

5-min Survey #2 of 6 Start		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance Zone (A,B,C,D,E)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
5-min Survey #2 of 6 End		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	

5-min Survey #3 of 6 Start		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance Zone (A,B,C,D,E)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
5-min Survey #3 of 6 End		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	

5-min Survey #4 of 6 Start		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance Zone (A,B,C,D,E)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
5-min Survey #4 of 6 End		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	

5-min Survey #5 of 6 Start		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance Zone (A,B,C,D,E)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
5-min Survey #5 of 6 End		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	

5-min Survey #6 of 6 Start		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance Zone (A,B,C,D,E)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
5-min Survey #6 of 6 End		Local Time (24 hr)			Latitude (DD)			Longitude (DD)	



## **ATTACHMENT B MMSO INCIDENT REPORT FORM**

## Marine Mammals and Seabird Observer (MMSO) Incident Report

Project Information		
Client: Agnico Eagle		Date:
Project Name (circle one): <i>Meadowbank</i> <i>Meliadine</i>		General Location:
Latitude (DD):		Longitude (DD):
Vessel Contractor Information		
Vessel Contractor Name:		Site Supervisor or Captain:
Vessel Name/Type:		MMSO Name:
General Weather Conditions (throughout the day):	Wind (knots):	
	Sea State:	
	Swell Height (m):	
	Temperature (°C):	
	Notes:	
Time Start/Time End MMSO Duties (HH:MM):	Start:	End:

### Record of Vessel-Animal Collisions/Interactions in Water

Species	Number of Individuals	Time (HH:MM)	Location		Visibility (m)/ Sea State	Comments
			Latitude (DD)	Longitude (DD)		

### Record of Bird on Deck

Species	Number of Individuals	State of Bird (injured, stranded, or dead)	Time (HH:MM)	Visibility (m)/ Sea State	Comments

### Mitigation Log

Time (UTC; HH:MM)	Was Mitigation Implemented?	Location		Rationale for Implementation
		Latitude (DD)	Longitude (DD)	

## **ATTACHMENT C COMMON SEABIRD ID GUIDE**

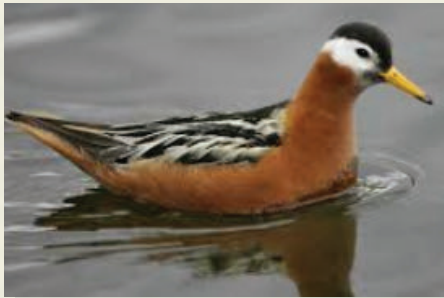
# COMMON SEABIRD ID GUIDE

## Small Seabirds

### Red Phalarope

**Size:** L 8.5" WS 17" WT 1.9 oz (55 g)

**Body:** Very small, shorebird-like seabird



### Red-necked Phalarope

**Size:** L 7.75" WS 15" WT 1.2 oz (35 g)

**Body:** Very small, shorebird-like seabird



## Puffin-like Seabirds

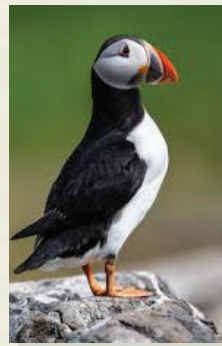
### Atlantic Puffin

**Size:** L 12.5" WS 21" WT 13 oz (380 g)

**Body:** Small, stocky, bright bill, black and white plumage

**DCs:**

- Colourful bill
- Black band around neck while flying



### Razorbill

**Size:** L 17" WS 26" WT 1.6 lbs

**Body:** Medium, long tail, black and white plumage

**DCs:**

- Large, thick bill
- Long- pointed tail
- Dark rump



### Thick-billed Murre

**Size:** L 18" WS 28" WT 2.1 lbs

**Body:** Medium, stocky; black and white plumage

**DCs:**

- Short bill
- Pure white belly
- Larger head than Common



# COMMON SEABIRD ID GUIDE

## Long-winged Seabirds

### Northern Fulmar

**Size:** L 18" WS 42"  
WT 1.3 lbs

**Body:** Large, stocky and thick-necked



## Gulls

### Herring Gull

**Size:** L 25" WS 58" WT 2.5 lbs

**Body:** Large, white-headed

**DCs:**

- Medium grey back
- Black and white wing tips



### Iceland Gull

**Size:** L 22" WS 54" WT 1.8 lbs

**Body:** Medium, white-headed

**DCs:**

- Light- great back
- No or less dark marks on wing tips



### Glaucous Gull

**Size:** L 27" WS 60" WT 3.1 lbs

**Body:** Large, white-headed

**DCs:**

- Light- great back
- White wing tips



### Black-legged Kittiwake

**Size:** L 17" WS 36"  
WT 14 oz (400g)

**Body:** Small, white-headed

**DCs:**

- Black legs
- Solid yellow bill
- Black tipped wings



## Gull-like Seabirds

### Long-tailed Jaeger

**Size:** L 15" WS 43" WT 11 oz (300 g)

**Body:** Medium, Slender gull-like seabird

**DCs:**

- Very long tail
- State grey back, dark cap
- No chest band



### Parasitic Jaeger

**Size:** L 16.5" WS 46" WT 1 lb

**Body:** Medium, Slender gull-like seabird

**DCs:**

- Dark back and wings; dark cap
- Pale chest with weak dark band
- Longer tail



### Pomarine Jaeger

**Size:** L 18.5" WS 52" WT 1.5 lbs

**Body:** Medium, heavy body, broad wings

**DCs:**

- Dark back and wings; dark head
- Pale chest with dark band



# COMMON SEABIRD ID GUIDE

## Sea Ducks

### Greater Scaup

**Size:** L 18" WS 28" WT 2.3 lbs

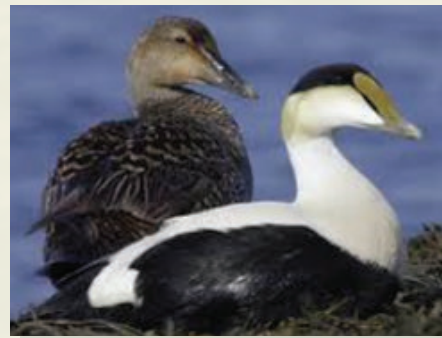
**Body:** Medium; black and white duck (male)



### Common Eider

**Size:** L 24" WS 38" WT 4.7 lbs

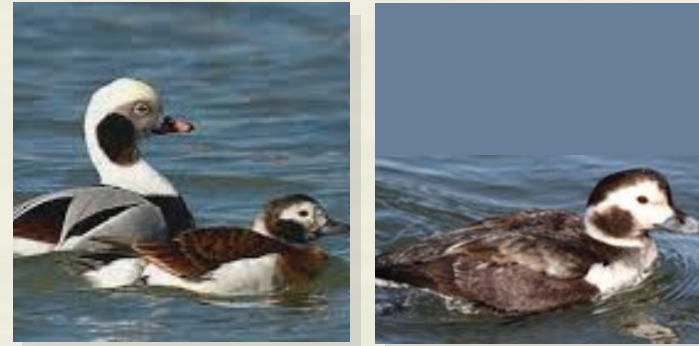
**Body:** Large; wedge-shaped head, mainly white face, neck and back (male)



### Long-tailed Duck

**Size:** L 16.5" WS 28" WT 1.6 lbs

**Body:** Small; round body, dark wings, distinctive patterns and long tail (male)



## Loons

### Common Loon

**Size:** L 32" WS 46" WT 9 lbs

**Body:** Very large; thick body, boldly patterned back and neck; heavy bill

**DCs:**

- Black head and bill
- Black and white pattern on back
- White chest and belly



## Sea Ducks/Seabirds

### Surf Scoter

**Size:** L 20" WS 30" WT 2.1 lbs

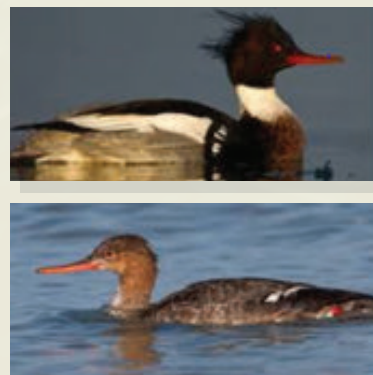
**Body:** Medium; dark-bodied sea duck; large multicoloured bill (male)



### Red-breasted Merganser

**Size:** L 25" WS 34" WT 2.3 lbs

**Body:** Large; thin-billed, black, tufted-head, white neck (male)



### Black Guillemot

**Size:** L 13" WS 21" WT 15 oz (430g)

**Body:** Small; chunky, black body, white wings



### Red-throated Loon

**Size:** L 25" WS 38" WT 3.1 lbs

**Body:** Large; smaller, slender body, short neck compared to Common

**DCs:**

- Grey head and back
- Rust coloured throat
- White chest and belly




## **ATTACHMENT D INCIDENTAL MARINE WILDLIFE SIGHTINGS FORM**



**AGNICO EAGLE**

# Incidental Marine Wildlife Sightings Form

(1 form per observation; PLEASE PRINT; circle options provided in *italics* as appropriate)

General Information			
Vessel Name		Date	
Observer Name		Local Time (24 hr)	
Vessel Information			
Ship Speed (kt)		Ship Heading (compass)	
Latitude (decimal degrees)		Longitude (decimal degrees)	
Environmental Information			
Beaufort Wind Force		Visibility (km)	
Wind Direction			
Observation Information			
Species <sup>1</sup>		ID Reliability	<i>Positive / Probable / Maybe</i>
Distance from vessel when first seen (m)		How close did the animal get to the vessel (m)?	
Number of Individuals	<i>Best Estimate:</i> <b>OR</b> <i>Maximum/Minimum:</i>		
Behaviour	Mammals:	<i>Swimming</i>	<i>Diving</i>
		<i>Dead</i>	<i>Resting on land</i>
	Birds:	<i>Flying</i>	<i>Feeding</i>
		<i>Resting on ocean surface</i>	<i>Resting on land</i>
	<i>Escape Ship - Flying</i>	<i>Escape Ship - Diving</i>	<i>Dead</i>
Other (describe):			
Other notes (e.g., physical descriptions, distinctive behaviours, drawing)		Position & Travel Relative to Ship [draw arrow]	 <b>OR</b> <i>Variable Travel Directions</i>
Was this observation the result of a SHIP STRIKE?	Yes	No	<i>If yes, fill out "MMSO Incident Report"</i>
Mitigation Action Taken			
	Yes	No	
If yes, describe mitigation actions (e.g., change in course or speed) and result (e.g., maintained a buffer of x metres from wildlife)	ACTION:  RESULT:		

<sup>1</sup> Refer to list of species in the ID Guides



# APPENDIX D      MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023



APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Survey Type	Time at Start	Time at End	Start Latitude	Start Longitude	End Latitude	End Longitude	Platform Activity	Visibility (km)	Weather Notes	Glare Condition Notes	Sea State Code
Mammals	Meliadine	27-Jul-23	Stationary	17:45	-	062°47,05N	091°59,06W	NA	NA	Stationary	8	Clear	Bright	0
	Meliadine	28-Jul-23	Stationary	19:00	-	062°47,80N	092°05,70W	NA	NA	Stationary	8	Clear	Bright	0
	Meliadine	26-Jul-23	Stationary	23:45	-	062°47,04N	091°59,04W	NA	NA	Stationary	8	Partly Cloudy	None	2
	Meliadine	29-Jul-23	Stationary	13:30	-	062°47,80N	092°05,80W	NA	NA	Stationary	8	Clear	None	0
	Meliadine	30-Jul-23	Stationary	8:15	-	062°47,80N	092°05,80W	NA	NA	Stationary	8	Clear	None	0
	Meliadine	31-Jul-23	Stationary	9:00	-	062°45,01N	091°58,06W	NA	NA	Stationary	8	Clear	None	0
	Meliadine	01-Aug-23	Stationary	8:00	-	062°47,80N	092°05,70W	NA	NA	Stationary	8	Clear	Bright	0
	Meliadine	02-Aug-23	Stationary	9:45	-	062°47,80N	092°05,70W	NA	NA	Stationary	8	Clear	None	0
	Meliadine	03-Aug-23	Stationary	9:00	-	062°47,07N	091°69,04W	NA	NA	Stationary	8	Clear	None	0
	Meliadine	04-Aug-23	Transect	10:45	11:20	061°24,90N	088°50,60W	061°20,10N	088°40,10W	Moving	8	Clear	None	2
	Meadowbank	31-Jul-23	NA	12:39	NA	063°59,10N	093°29,40W	NA	NA	NA	7	-	-	-
	Meliadine	06-Aug-23	Stationary	11:30	-	056°33,04N	079°13,07W	NA	NA	Stationary	8	Clear	None	1
	Meliadine	07-Aug-23	Stationary	7:45	-	056°33,04N	079°13,07W	NA	NA	Stationary	8	Clear	Bright	0
	Meliadine	08-Aug-23	Stationary	8:00	-	056°33,04N	079°13,07W	NA	NA	Stationary	8	Clear	Bright	0
	Meliadine	09-Aug-23	Transect	14:00	14:30	060°18,80N	079°13,80W	060°74,10N	079°13,20W	Moving	8	Clear	None	4
	Meliadine	10-Aug-23	Transect	9:00	10:00	062°36,40N	076°10,40W	062°35,10N	075°48,80W	Moving	6	100% Cloud	None	2
	Meliadine	11-Aug-23	Transect	11:45	12:45	061°15,50N	065°49,20W	065°15,70N	065°15,60W	Moving	8	Clear	None	2
	Meadowbank	19-Jul-23	Transect	15:50	-	062°12,54N	084°58,53W	062°17,42N	085°24,41W	Moving	10	Clear	Slight Grey	3
	Meadowbank	19-Jul-23	Transect	13:00	-	062°00,54N	084°58,06W	062°04,30N	085°00,06W	Moving	10	Partly Cloudy	None	4
	Meadowbank	20-Jul-23	Transect	13:07	-	063°23,18N	090°39,55W	063°30,43N	090°50,14W	Moving	10	Partly Cloudy	None	3
	Meadowbank	20-Jul-23	Transect	15:30	16:30	063°35,24N	091°10,48W	063°37,48N	091°31,12W	Moving	10	Partly Cloudy	Slight Grey	0
	Meadowbank	21-Jul-23	Stationary	11:00	12:00	-	-	NA	NA	Stationary	5	Clear	None	1
	Meadowbank	22-Jul-23	Stationary	12:00	13:00	063°56,35N	093°35,53W	063°56,35N	093°35,56W	Stationary	6	Partly Cloudy	None	0
	Meadowbank	23-Jul-23	Stationary	11:00	12:00	063°56,41N	093°35,58W	063°56,41N	093°35,58W	Stationary	10	Clear	None	0
	Meadowbank	24-Jul-23	Stationary	11:00	12:00	063°56,38N	093°35,56W	063°56,38N	093°35,56W	Stationary	10	Partly Cloudy	None	1
	Meadowbank	25-Jul-23	Stationary	12:00	13:00	063°56,38N	093°35,56W	063°56,38N	093°35,56W	Stationary	10	Partly Cloudy	Bright	0
	Meadowbank	26-Jul-23	Stationary	11:00	12:00	063°56,42N	093°35,56W	063°56,35N	093°35,56W	Stationary	10	Partly Cloudy	Bright	1
	Meadowbank	27-Jul-23	Stationary	11:00	12:00	063°56,38N	093°35,49W	063°56,38N	093°35,49W	Stationary	10	Partly Cloudy	None	2
	Meliadine	18-Jul-23	NA	18:38	NA	062°21,70N	088°28,20W	NA	NA	NA	30	-	-	-
	Meadowbank	29-Jul-23	Stationary	11:00	12:00	063°56,46N	093°36,07W	063°56,46N	093°36,07W	Stationary	10	Partly Cloudy	None	0
	Meadowbank	31-Jul-23	Transect	13:00	14:00	062°58,26N	088°43,12W	062°49,16N	088°07,12W	Moving	10	Clear	None	3
	Meadowbank	30-Jul-23	Stationary	11:00	12:00	063°56,42N	093°35,49W	063°94,50N	093°59,70W	Stationary	10	Clear	None	0
	Meadowbank	13-Aug-23	Transect	15:00	16:30	061°41,01N	069°12,04W	061°31,40N	068°27,70W	Moving	25	Partly Cloudy	Bright	2
	Meadowbank	31-Jul-23	Transect	18:10	19:10	062°27,29N	086°09,60W	062°21,34N	085°40,46W	Moving	10	Clear	None	1
	Both	03-Sep-23	NA	16:58	NA	054°47,00N	056°46,70W	NA	NA	NA	10	-	-	-
	Both	18-Oct-23	NA	10:24	NA	060°18,10N	063°46,50W	NA	NA	NA	10	-	-	-
	Meadowbank	01-Aug-23	Transect	10:00	11:00	062°39,22N	078°16,13W	062°38,20N	077°40,48W	Moving	10	Partly Cloudy	-	0
	Meadowbank	28-Jul-23	NA	12:00	13:00	-	-	NA	NA	Stationary	10	Partly Cloudy	None	1
	Meadowbank	01-Aug-23	Transect	13:00	14:00	062°37,38N	076°42,04W	-	-	Moving	10	Partly Cloudy	None	2
	Meadowbank	02-Aug-23	Transect	13:00	14:00	060°40,10N	065°01,26W	060°21,31N	064°12,32W	Moving	9	Partly Cloudy	None	3
Both	18-Aug-23	Transect	14:00	15:00	060°34,23N	065°08,20W	060°36,54N	065°30,49W	Moving	10	Partly Cloudy	None	2	
Both	19-Aug-23	Transect	9:30	10:30	062°20,24N	072°37,48W	062°27,36N	072°58,48W	Moving	10	Clear	None	2	
Both	19-Aug-23	Transect	12:00	13:00	062°32,08N	073°36,59W	062°31,09N	074°06,06W	Moving	9	Partly Cloudy	None	1	
Both	20-Aug-23	Transect	8:45	9:45	062°02,60N	082°21,54W	062°00,00N	082°48,36W	Moving	10	Partly Cloudy	None	5	
Both	21-Aug-23	Transect	12:00	13:00	061°51,96N	083°48,79W	062°00,14N	084°12,66W	Moving	8	Clear	None	3	
Both	21-Aug-23	Stationary	-	-	063°56,70N	093°35,60W	NA	NA	Stationary	5	Partly Cloudy	None	1	
Both	22-Aug-23	Stationary	-	-	063°56,70N	093°35,60W	NA	NA	Stationary	5	Partly Cloudy	None	1	
Both	23-Aug-23	Stationary	-	-	063°56,70N	093°35,60W	NA	NA	Stationary	5	Partly Cloudy	None	1	
Both	24-Aug-23	Stationary	-	-	063°56,70N	093°35,60W	NA	NA	Stationary	5	Partly Cloudy	None	1	

APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	Height of Eye (m)	Species Observed?	Species	Count	
Mammals	Meliadine	27-Jul-23	0	Light Wind	160	0	10	No	No Observations	NA	
	Meliadine	28-Jul-23	0	Light Wind	190	0	10	No	No Observations	NA	
	Meliadine	26-Jul-23	0.5	Light Wind	95	0	10	No	No Observations	NA	
	Meliadine	29-Jul-23	0	Light Wind	130	0	10	No	No Observations	NA	
	Meliadine	30-Jul-23	0	Calm	0	0	10	No	No Observations	NA	
	Meliadine	31-Jul-23	0	Calm	315	0	10	No	No Observations	NA	
	Meliadine	01-Aug-23	0	Calm	90	0	15	No	No Observations	NA	
	Meliadine	02-Aug-23	0	Light Wind	90	0	15	No	No Observations	NA	
	Meliadine	03-Aug-23	0	Calm	190	0	15	No	No Observations	NA	
	Meliadine	04-Aug-23	0.5	Light Wind	215	12.4	15	No	No Observations	NA	
	Meadowbank	31-Jul-23	-	Calm	0	0	-	-	Yes	Bearded Seal	1
	Meliadine	06-Aug-23	0.2	Light Wind	75	0	15	15	No	No Observations	NA
	Meliadine	07-Aug-23	0	Calm	70	0	15	15	No	No Observations	NA
	Meliadine	08-Aug-23	0	Calm	90	0	15	15	No	No Observations	NA
	Meliadine	09-Aug-23	3	Gale Force Wind	0	10.6	15	15	No	No Observations	NA
	Meliadine	10-Aug-23	1	Light Wind	260	11	15	15	No	No Observations	NA
	Meliadine	11-Aug-23	1	Calm	330	11.8	15	15	No	No Observations	NA
	Meadowbank	19-Jul-23	1	Strong Wind	30	11.7	21	21	No	No Observations	NA
	Meadowbank	19-Jul-23	3	Strong Wind	27	10	21	21	No	No Observations	NA
	Meadowbank	20-Jul-23	2	Light Wind	315	9.2	21	21	No	No Observations	NA
	Meadowbank	20-Jul-23	0	Calm	-	10	21	21	No	No Observations	NA
	Meadowbank	21-Jul-23	1	Light Wind	-	0.2	21	21	No	No Observations	NA
	Meadowbank	22-Jul-23	1	Light Wind	-	0.2	21	21	No	No Observations	NA
	Meadowbank	23-Jul-23	1	Light Wind	-	0.1	21	21	No	No Observations	NA
	Meadowbank	24-Jul-23	2	Light Wind	-	0.2	21	21	No	No Observations	NA
	Meadowbank	25-Jul-23	1	Light Wind	-	0.1	21	21	No	No Observations	NA
	Meadowbank	26-Jul-23	2	Strong Wind	-	0	21	21	No	No Observations	NA
	Meadowbank	27-Jul-23	2	Calm	-	0.1	21	21	No	No Observations	NA
	Meliadine	18-Jul-23	-	Light Wind	315	13.7	-	-	Yes	Beluga Whale	1
	Meadowbank	29-Jul-23	1	Calm	-	0	21	21	No	No Observations	NA
	Meadowbank	31-Jul-23	4	Light Wind	315	15	21	21	No	No Observations	NA
	Meadowbank	30-Jul-23	0	Light Wind	-	0.4	21	21	No	No Observations	NA
	Meadowbank	13-Aug-23	0.5	Light Wind	-	14	22	22	Yes	Beluga Whale	10
	Meadowbank	31-Jul-23	0.5	Light Wind	-	15	21	21	No	No Observations	NA
	Both	03-Sep-23	-	Strong Wind	225	14	-	-	Yes	Bowhead Whale	1
	Both	18-Oct-23	-	Light Wind	338	14	-	-	Yes	Harbour Porpoise	10
	Meadowbank	01-Aug-23	0	Light Wind	100	15.5	21	21	No	No Observations	NA
	Meadowbank	28-Jul-23	2	Light Wind	-	0	21	21	Yes	Harbour Seal	1
	Meadowbank	01-Aug-23	4	Light Wind	225	14	21	21	No	No Observations	NA
	Meadowbank	02-Aug-23	2	-	90	13.8	21	21	No	No Observations	NA
Both	18-Aug-23	1	Light Wind	135	12.1	21	21	No	No Observations	NA	
Both	19-Aug-23	1	Light Wind	-	14	21	21	No	No Observations	NA	
Both	19-Aug-23	0	Light Wind	-	15	21	21	No	No Observations	NA	
Both	20-Aug-23	2	Strong Wind	280	13.4	21	21	No	No Observations	NA	
Both	21-Aug-23	2	Light Wind	180	13.2	21	21	No	No Observations	NA	
Both	21-Aug-23	1	Light Wind	-	1	21	21	No	No Observations	NA	
Both	22-Aug-23	1	Strong Wind	-	1	21	21	No	No Observations	NA	
Both	23-Aug-23	1	Light Wind	-	1	21	21	No	No Observations	NA	
Both	24-Aug-23	-1	Light Wind	-	1	21	21	No	No Observations	NA	

APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Survey Type	Time at Start	Time at End	Start Latitude	Start Longitude	End Latitude	End Longitude	Platform Activity	Visibility (km)	Weather Notes	Glare Condition Notes	Sea State Code
Mammals (cont'd)	Both	25-Aug-23	Stationary	-	-	063°56,00N	093°35,00W	NA	NA	Stationary	5	100% Cloud	None	1
	Both	26-Aug-23	Stationary	-	-	063°56,00N	093°39,00W	NA	NA	Stationary	5	100% Cloud	None	1
	Both	27-Aug-23	Stationary	-	-	063°56,00N	093°35,00W	NA	NA	Stationary	5	Partly Cloudy	None	1
	Both	28-Aug-23	Stationary	-	-	063°56,00N	093°35,00W	NA	NA	Stationary	5	Clear	None	1
	Both	29-Aug-23	Stationary	-	-	063°56,00N	093°35,00W	NA	NA	Stationary	5	Partly Cloudy	None	1
	Both	30-Aug-23	Stationary	12:00	13:00	063°56,00N	093°35,00W	NA	NA	Stationary	10	Clear	None	0
	Both	31-Aug-23	Transect	9:05	10:30	062°12,36N	084°57,00W	062°00,00N	083°56,49W	Moving	10	Partly Cloudy	Slight Grey	2
	Both	01-Sep-23	Transect	9:00	10:00	062°36,50N	072°72,00W	062°24,00N	072°34,00W	Moving	10	100% Cloud	None	2
	Meadowbank	30-Jul-23	NA	12:00	NA	063°56,52N	093°37,05W	NA	NA	NA	11	-	-	-
	Meliadine	11-Oct-23	NA	18:00	NA	062°36,70N	091°01,10W	NA	NA	NA	20	-	-	-
	Both	18-Sep-23	Transect	13:00	14:00	060°33,11N	064°58,12W	060°23,16N	065°17,06W	Moving	0.1	Fog	Slight Grey	1
	Both	19-Sep-23	Transect	13:00	14:00	062°30,18N	074°24,18W	062°31,52N	074°50,28W	Moving	10	Partly Cloudy	None	1
	Both	20-Sep-23	Transect	11:00	12:00	061°58,55N	083°55,52W	061°59,53N	084°20,53W	Moving	9	Clear	None	1
	Both	21-Sep-23	Stationary	8:00	9:00	062°45,29N	092°04,52W	062°75,80N	092°08,10W	Stationary	10	Partly Cloudy	None	1
	Both	22-Sep-23	Stationary	13:00	14:00	063°55,59N	093°36,58W	063°55,59N	093°36,58W	Stationary	10	Clear	Slight Grey	1
	Both	23-Sep-23	Stationary	21:00	22:00	063°56,00N	093°36,00W	063°56,00N	093°36,00W	Stationary	10	Partly Cloudy	None	1
	Both	24-Sep-23	Stationary	20:00	-	063°56,00N	093°36,00W	NA	NA	Stationary	10	Clear	None	1
	Both	25-Sep-23	Stationary	21:00	-	063°93,00N	093°60,00W	NA	NA	Stationary	6	100% Cloud	None	2
	Both	26-Sep-23	Stationary	22:00	-	063°44,00N	093°60,00W	NA	NA	Stationary	10	Partly Cloudy	None	1
	Both	27-Sep-23	Stationary	21:00	-	063°93,00N	093°60,00W	NA	NA	Stationary	10	Partly Cloudy	None	1
	Both	28-Sep-23	Stationary	22:00	-	063°93,00N	093°60,00W	NA	NA	Stationary	10	100% Cloud	None	1
	Both	29-Sep-23	Stationary	6:00	-	063°93,00N	093°60,00W	NA	NA	Stationary	10	Partly Cloudy	None	1
	Both	30-Sep-23	Transect	10:00	11:00	063°00,00N	084°14,53W	063°04,48N	083°50,28W	Moving	6	100% Cloud	Slight Grey	3
	Both	01-Oct-23	Transect	10:00	11:00	062°10,41N	071°42,04W	062°04,48N	071°19,12W	Moving	9	100% Cloud	None	2
	Meliadine	18-Oct-23	Transect	15:00	16:00	061°43,48N	068°57,00W	061°49,48N	069°17,24W	Moving	10	100% Cloud	None	1
	Meliadine	19-Oct-23	Transect	10:15	11:15	062°38,60N	077°24,36W	062°40,12N	072°47,24W	Moving	8	100% Cloud	None	2
	Meliadine	20-Oct-23	Transect	13:00	14:00	062°29,24N	089°53,24W	062°31,48N	090°16,48W	Moving	10	100% Cloud	None	1
	Meliadine	21-Oct-23	Stationary	22:00	-	062°46,48N	092°05,60W	NA	NA	Stationary	10	100% Cloud	None	1
	Meliadine	22-Oct-23	Stationary	22:00	23:00	062°46,48N	092°05,60W	NA	NA	Stationary	10	100% Cloud	None	1
	Meliadine	23-Oct-23	Stationary	22:00	-	062°46,48N	092°05,60W	NA	NA	Stationary	10	100% Cloud	-	1
	Meliadine	23-Oct-23	NA	10:12	NA	060°32,00N	064°70,00W	NA	NA	NA	25	-	-	-
	Meliadine	24-Oct-23	Stationary	22:00	-	062°46,48N	092°05,60W	NA	NA	Stationary	10	Partly Cloudy	None	1
	Meliadine	25-Oct-23	Stationary	22:00	-	062°46,48W	092°05,60W	NA	NA	Stationary	10	100% Cloud	None	1
	Meliadine	26-Oct-23	Stationary	22:00	-	062°46,48N	092°05,60W	NA	NA	Stationary	10	100% Cloud	None	1
	Meliadine	27-Oct-23	Stationary	22:00	-	062°46,48N	092°05,60W	NA	NA	Stationary	10	100% Cloud	None	1
	Meliadine	28-Oct-23	Stationary	22:00	-	062°46,48N	092°05,60W	NA	NA	Stationary	10	100% Cloud	None	1
	Meliadine	30-Oct-23	Transect	15:30	16:25	062°27,54N	089°32,60W	062°25,12N	089°00,00W	Moving	8	Snow	None	1
	Meliadine	31-Oct-23	Transect	13:00	14:00	062°27,54W	080°32,60W	062°25,12W	080°00,00W	Moving	10	Partly Cloudy	-	1
	Meliadine	01-Nov-23	Transect	13:00	14:00	061°26,17N	069°45,36W	-	-	Moving	10	Partly Cloudy	None	2
	Meadowbank	13-Aug-23	NA	13:26	NA	061°49,20N	069°53,90W	NA	NA	NA	25	-	-	-
Both	13-Aug-23	Transect	10:50	-	-	-	-	-	Moving	20	Clear	None	0	
Meadowbank	31-Jul-23	NA	16:16	NA	062°27,95N	079°57,15W	NA	NA	NA	25	-	-	-	
Meliadine	29-Jun-23	Transect	18:32	20:30	-	-	-	-	Moving	-	Clear	None	-	
Meliadine	30-Jun-23	Transect	13:47	14:49	-	-	-	-	Moving	-	Rain	None	-	
Meliadine	02-Jul-23	NA	5:30	7:30	-	-	NA	NA	NA	-	Clear	Bright	-	
Meliadine	03-Jul-23	Stationary	10:30	12:00	064°46,50N	092°05,80W	064°46,50N	092°05,80W	Stationary	10	Clear	Bright	0	
Meliadine	04-Jul-23	Stationary	10:00	11:30	064°46,50N	092°05,80W	064°46,50N	092°05,80W	Stationary	10	Partly Cloudy	None	1	
Meliadine	05-Jul-23	Stationary	10:00	11:30	064°46,50N	092°05,80W	064°46,50N	092°05,80W	Stationary	10	Partly Cloudy	Slight Grey	2	
Meliadine	06-Jul-23	Stationary	10:00	11:30	064°46,50N	092°05,80W	064°46,50N	092°05,80W	Stationary	10	Partly Cloudy	Slight Grey	1	

APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	Height of Eye (m)	Species Observed?	Species	Count
Mammals (cont'd)	Both	25-Aug-23	-1	Light Wind	-	1	21	No	No Observations	NA
	Both	26-Aug-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Both	27-Aug-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Both	28-Aug-23	1	Calm	-	1	21	No	No Observations	NA
	Both	29-Aug-23	1	Calm	-	1	21	No	No Observations	NA
	Both	30-Aug-23	-	Calm	-	NA	21	No	No Observations	NA
	Both	31-Aug-23	2	Light Wind	330	15	21	No	No Observations	NA
	Both	01-Sep-23	1	Light Wind	330	16	21	No	No Observations	NA
	Meadowbank	30-Jul-23	-	Calm	270	3	-	Yes	Harbour Seal	1
	Meliadine	11-Oct-23	-	Light Wind	0	13	-	Yes	Harbour Seal	1
	Both	18-Sep-23	0.5	Light Wind	225	12.4	21	No	No Observations	NA
	Both	19-Sep-23	0.5	Light Wind	135	14.4	21	No	No Observations	NA
	Both	20-Sep-23	0.5	Light Wind	-	13.1	21	No	No Observations	NA
	Both	21-Sep-23	0.5	Light Wind	135	0	21	No	No Observations	NA
	Both	22-Sep-23	0.5	Light Wind	225	NA	21	No	No Observations	NA
	Both	23-Sep-23	1	Strong Wind	180	0	21	No	No Observations	NA
	Both	24-Sep-23	1	Calm	-	0	21	No	No Observations	NA
	Both	25-Sep-23	2	Gale Force Wind	270	1	21	No	No Observations	NA
	Both	26-Sep-23	1	Light Wind	135	0	21	No	No Observations	NA
	Both	27-Sep-23	1	Light Wind	270	0	21	No	No Observations	NA
	Both	28-Sep-23	1	Strong Wind	270	0	21	No	No Observations	NA
	Both	29-Sep-23	1	Light Wind	270	1	21	No	No Observations	NA
	Both	30-Sep-23	2	Strong Wind	180	15.8	21	No	No Observations	NA
	Both	01-Oct-23	1	Light Wind	225	14	21	No	No Observations	NA
	Meliadine	18-Oct-23	0	Light Wind	225	12.5	21	No	No Observations	NA
	Meliadine	19-Oct-23	1	Light Wind	45	12.6	21	No	No Observations	NA
	Meliadine	20-Oct-23	0	Strong Wind	0	12.7	21	No	No Observations	NA
	Meliadine	21-Oct-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Meliadine	22-Oct-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Meliadine	23-Oct-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Meliadine	23-Oct-23	-	Light Wind	225	13.5	-	Yes	Harp Seal	4
	Meliadine	24-Oct-23	1	Light Wind	315	1	21	No	No Observations	NA
	Meliadine	25-Oct-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Meliadine	26-Oct-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Meliadine	27-Oct-23	1	Strong Wind	315	1	21	No	No Observations	NA
	Meliadine	28-Oct-23	1	Light Wind	315	1	21	No	No Observations	NA
	Meliadine	30-Oct-23	0	Light Wind	180	13.5	21	No	No Observations	NA
	Meliadine	31-Oct-23	0	Light Wind	270	9.4	21	No	No Observations	NA
	Meliadine	01-Nov-23	1	Light Wind	270	13.9	21	No	No Observations	NA
	Meadowbank	13-Aug-23	-	Light Wind	112	14.5	-	Yes	Harp Seal	1
Both	13-Aug-23	0	Calm	-	11.5	28	Yes	Harp Seal	10	
Meadowbank	31-Jul-23	-	Light Wind	90	11.8	-	Yes	Hooded Seal	1	
Meliadine	29-Jun-23	-	Calm	-	-	20	No	No Observations	NA	
Meliadine	30-Jun-23	-	Light Wind	-	-	20	No	No Observations	NA	
Meliadine	02-Jul-23	-	Calm	-	-	20	No	No Observations	NA	
Meliadine	03-Jul-23	1	Light Wind	90	0	34	No	No Observations	NA	
Meliadine	04-Jul-23	1	Light Wind	200	0	34	No	No Observations	NA	
Meliadine	05-Jul-23	1	Light Wind	290	0	34	No	No Observations	NA	
Meliadine	06-Jul-23	1	Light Wind	180	0	34	No	No Observations	NA	

APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Survey Type	Time at Start	Time at End	Start Latitude	Start Longitude	End Latitude	End Longitude	Platform Activity	Visibility (km)	Weather Notes	Glare Condition Notes	Sea State Code
Mammals (cont'd)	Meliadine	07-Jul-23	Stationary	10:30	12:00	064°46,50N	092°05,80W	064°46,50N	092°05,80W	Stationary	10	Partly Cloudy	None	2
	Meliadine	08-Jul-23	Stationary	9:00	10:30	064°46,50N	092°05,80W	064°46,50N	092°05,80W	Stationary	10	Partly Cloudy	None	1
	Meliadine	09-Jul-23	Transect	18:00	19:30	063°23,00N	082°47,00W	063°19,00N	082°23,00W	Moving	-	Partly Cloudy	None	2
	Meliadine	10-Jul-23	Transect	18:00	19:30	063°11,50N	075°27,70W	063°11,10N	075°07,00W	Moving	1	Fog	None	1
	Meliadine	11-Jul-23	Transect	18:00	19:30	061°07,03N	068°25,04W	-	-	Moving	0	Fog	None	4
	Meadowbank	01-Aug-23	NA	16:02	NA	063°03,51N	089°11,26W	NA	NA	NA	-	-	-	-
	Meadowbank	08-Aug-23	Stationary	12:00	13:30	063°56,40N	093°36,50W	063°56,40N	093°36,50W	Stationary	10	Clear	Bright	0
	Meadowbank	09-Aug-23	Stationary	12:30	14:00	063°56,40N	093°36,50W	063°56,40N	093°36,50W	Stationary	10	Clear	Bright	0
	Meadowbank	11-Aug-23	Transect	15:00	16:30	063°43,40N	091°49,80W	063°35,90N	091°17,21W	Moving	10	100% Cloud	Bright	1
	Meadowbank	12-Aug-23	Transect	15:00	16:30	062°20,20N	080°54,50W	062°26,10N	080°12,80W	Moving	1	Fog	Bright	1
	Both	03-Sep-23	NA	19:28	NA	054°05,50N	056°05,20W	NA	NA	NA	8	-	-	-
	Meliadine	27-Jun-23	Transect	12:45	13:45	-	-	-	-	Moving	-	Clear	Bright	-
	Both	18-Oct-23	NA	11:45	NA	060°04,10N	063°33,00W	NA	NA	NA	1	-	-	-
	Meadowbank	30-Jul-23	Transect	9:30	11:00	061°11,20N	066°24,05W	061°22,30N	066°56,20W	Moving	1	100% Cloud	None	3
	Meadowbank	31-Jul-23	Transect	9:30	11:00	062°42,70N	076°49,07W	062°41,00N	077°30,30W	Moving	30	Clear	None	1
	Meadowbank	01-Aug-23	Transect	9:30	11:00	062°34,00N	086°40,00W	062°40,11N	087°11,00W	Moving	10	Partly Cloudy	None	3
	Meadowbank	03-Aug-23	Stationary	13:30	15:00	063°56,50N	093°36,20W	063°56,50N	093°36,20W	Stationary	10	Clear	Bright	0
	Meadowbank	04-Aug-23	Stationary	12:30	14:00	063°56,50N	093°36,40W	063°56,50N	093°36,40W	Stationary	10	Clear	Bright	0
	Meadowbank	05-Aug-23	Stationary	14:00	15:30	063°56,50N	093°36,20W	063°56,50N	093°36,20W	Stationary	10	Clear	Bright	1
	Meadowbank	06-Aug-23	Stationary	12:00	13:30	063°56,50N	093°36,50W	063°56,50N	093°36,50W	Stationary	10	Partly Cloudy	Slight Grey	1
	Meadowbank	07-Aug-23	Stationary	10:30	12:00	063°56,40N	093°36,60W	063°56,40N	093°36,60W	Stationary	10	Clear	Slight Grey	2
	Both	04-Sep-23	Transect	12:15	13:45	060°56,30N	066°36,30W	061°03,90N	067°07,30W	Moving	10	100% Cloud	None	4
	Both	05-Sep-23	Transect	12:30	14:00	062°34,80N	070°32,30W	062°36,30N	076°10,00W	Moving	9	Partly Cloudy	None	4
	Both	06-Sep-23	Transect	14:00	15:30	062°18,10N	086°39,40W	062°18,00N	087°13,10W	Moving	10	Partly Cloudy	None	2
	Both	14-Sep-23	Transect	12:30	14:00	062°02,90N	082°53,20W	062°08,50N	082°13,30W	Moving	10	Partly Cloudy	None	1
	Both	06-Aug-23	NA	16:20	NA	060°58,98N	066°39,37W	NA	NA	NA	0.5	-	-	-
	Both	03-Oct-23	Transect	9:30	11:00	062°25,40N	069°57,50W	062°29,80N	070°34,10W	Moving	10	Partly Cloudy	None	6
	Both	04-Oct-23	Transect	9:30	11:00	063°04,10N	081°17,90W	063°05,10N	082°02,60W	Moving	10	100% Cloud	None	2
	Both	07-Oct-23	Stationary	10:00	11:30	063°55,90N	093°37,20W	063°55,90N	093°37,20W	Stationary	10	Clear	None	2
	Both	10-Oct-23	Stationary	13:00	14:30	062°45,40N	092°04,30W	062°45,40N	092°04,30W	Stationary	10	Partly Cloudy	Slight Grey	3
	Both	11-Oct-23	Stationary	11:00	12:00	062°46,00N	092°04,00W	062°46,00N	092°04,00W	Stationary	10	Clear	Bright	2
	Both	12-Oct-23	Stationary	13:00	14:30	062°46,00N	092°03,80W	062°46,00N	092°03,80W	Stationary	10	Clear	Bright	1
Both	13-Oct-23	Stationary	11:00	12:30	062°45,90N	092°03,90W	062°45,90N	092°03,90W	Stationary	-	Partly Cloudy	None	-	
Both	15-Oct-23	Stationary	9:00	10:30	062°45,90N	092°03,70W	062°45,90N	092°03,70W	Stationary	10	Clear	None	2	
Both	10-Oct-23	Transect	14:00	15:30	061°59,50N	083°29,60W	062°11,90N	082°27,50W	Moving	10	Fog	-	3	
Meliadine	05-Aug-23	Transect	9:30	10:00	058°09,40N	082°28,60W	058°04,80N	082°19,60W	Moving	8	Clear	Bright	0	
Both	06-Aug-23	Transect	13:06	14:38	060°32,80N	065°19,20W	060°48,90N	065°56,20W	Moving	10	Clear	None	1	

APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	Height of Eye (m)	Species Observed?	Species	Count
Mammals (cont'd)	Meliadine	07-Jul-23	1	Light Wind	110	0	34	No	No Observations	NA
	Meliadine	08-Jul-23	1	Light Wind	120	0	34	No	No Observations	NA
	Meliadine	09-Jul-23	1	Strong Wind	27	12.8	34	No	No Observations	NA
	Meliadine	10-Jul-23	0.5	Light Wind	30	6	34	No	No Observations	NA
	Meliadine	11-Jul-23	2.5	Gale Force Wind	-	11.4	34	No	No Observations	NA
	Meadowbank	01-Aug-23	-	Calm	0	12	-	Yes	Hooded Seal	12
	Meadowbank	08-Aug-23	0	Calm	-	0	22	No	No Observations	NA
	Meadowbank	09-Aug-23	0	Calm	-	0	22	No	No Observations	NA
	Meadowbank	11-Aug-23	0	Light Wind	270	10.5	22	No	No Observations	NA
	Meadowbank	12-Aug-23	0.5	Light Wind	135	14	22	No	No Observations	NA
	Both	03-Sep-23	-	Strong Wind	180	14	-	Yes	Killer Whale	2
	Meliadine	27-Jun-23	0	Strong Wind	-	4	20	Yes	Polar Bear	1
	Both	18-Oct-23	-	Light Wind	135	14	-	Yes	Unknown Porpoise	5
	Meadowbank	30-Jul-23	1	Light Wind	45	12	21	No	No Observations	NA
	Meadowbank	31-Jul-23	1	Calm	-	14	21	No	No Observations	NA
	Meadowbank	01-Aug-23	1	Light Wind	248	10.7	21	No	No Observations	NA
	Meadowbank	03-Aug-23	0	Calm	-	0	21	No	No Observations	NA
	Meadowbank	04-Aug-23	0	Calm	-	0	22	No	No Observations	NA
	Meadowbank	05-Aug-23	0.1	Light Wind	180	0	22	No	No Observations	NA
	Meadowbank	06-Aug-23	0.1	Light Wind	-	0	24	No	No Observations	NA
	Meadowbank	07-Aug-23	0.2	Light Wind	180	0	24	No	No Observations	NA
	Both	04-Sep-23	3	Strong Wind	207	11.5	21	No	No Observations	NA
	Both	05-Sep-23	3	Strong Wind	270	11	21	No	No Observations	NA
	Both	06-Sep-23	2	Light Wind	310	10.5	21	No	No Observations	NA
	Both	14-Sep-23	1	-	320	14.4	21	No	No Observations	NA
	Both	06-Aug-23	-	Calm	0	13.5	-	Yes	Unknown Porpoise	7
	Both	03-Oct-23	3	Strong Wind	-	11	21	No	No Observations	NA
	Both	04-Oct-23	1	Light Wind	224	14	21	No	No Observations	NA
	Both	07-Oct-23	0.3	Light Wind	335	0	22	No	No Observations	NA
	Both	10-Oct-23	0.4	Light Wind	170	0	23	No	No Observations	NA
	Both	11-Oct-23	0.25	Light Wind	165	0	23	No	No Observations	NA
	Both	12-Oct-23	0.1	Light Wind	225	0	23	No	No Observations	NA
Both	13-Oct-23	-	Light Wind	330	0	23	No	No Observations	NA	
Both	15-Oct-23	0.15	Light Wind	300	0	23	No	No Observations	NA	
Both	10-Oct-23	0.5	-	248	13.2	22	No	No Observations	NA	
Meliadine	05-Aug-23	0	Calm	70	12.1	15	Yes	Unknown Seal	4	
Both	06-Aug-23	0.5	Light Wind	112	13.1	30	No	No Observations	NA	

APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Survey Type	Time at Start	Time at End	Start Latitude	Start Longitude	End Latitude	End Longitude	Platform Activity	Visibility (km)	Weather Notes	Glare Condition Notes	Sea State Code
Mammals (cont'd)	Meadowbank	13-Aug-23	Transect	15:00	16:30	061°41,01N	069°12,04W	061°31,40N	068°27,70W	Moving	25	Partly Cloudy	Bright	2
	Both	07-Aug-23	Transect	13:10	14:10	062°31,00N	075°29,00W	062°31,60N	075°58,20W	Moving	7	100% Cloud	Slight Grey	1
	Both	08-Aug-23	Transect	13:20	14:31	062°07,80N	086°09,60W	062°10,70N	086°38,90W	Moving	7	Partly Cloudy	None	1
	Both	09-Aug-23	Stationary	13:00	14:00	062°46,60N	092°05,80W	062°46,60N	092°05,80W	Stationary	7	Partly Cloudy	None	1
	Both	10-Aug-23	Stationary	13:30	14:00	062°46,60N	092°05,80W	062°46,60N	092°05,80W	Stationary	7	Clear	None	1
	Both	11-Aug-23	Stationary	13:00	14:00	062°46,60N	092°05,80W	062°46,60N	092°05,80W	Stationary	5	Partly Cloudy	None	1
	Both	18-Oct-23	NA	9:10	NA	060°29,90N	063°59,50W	NA	NA	NA	2	-	-	-
	Both	13-Aug-23	NA	12:03	NA	063°38,20N	091°32,40W	NA	NA	NA	10	-	-	-
	Both	14-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	7	Partly Cloudy	None	1
	Both	15-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	5	Clear	None	1
	Both	16-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	3	Rain	None	2
	Both	17-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	5	Partly Cloudy	None	2
	Both	18-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	6	100% Cloud	None	1
	Both	19-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	3	Rain	None	2
	Both	20-Aug-23	Stationary	13:00	14:00	062°46,50N	092°06,00W	062°46,50N	092°06,00W	Stationary	6	Partly Cloudy	None	1
	Both	21-Aug-23	Stationary	13:00	13:20	062°45,40N	092°05,70W	062°45,40N	092°05,70W	Stationary	7	Clear	None	1
	Both	22-Aug-23	Stationary	13:00	14:00	062°45,40N	092°05,70W	062°45,40N	092°05,70W	Stationary	5	Partly Cloudy	None	1
	Both	23-Aug-23	Transect	12:30	16:00	061°55,50N	082°41,10W	062°25,40N	081°29,20W	Moving	10	100% Cloud	Slight Grey	1
	Both	24-Aug-23	Transect	12:00	16:00	062°13,80N	071°44,50W	061°49,90N	070°07,40W	Moving	10	Clear	None	2
	Meadowbank	11-Sep-23	Transect	13:38	14:07	060°36,10N	065°04,70W	060°39,10N	065°16,40W	Moving	0.1	Fog	None	3
	Meadowbank	11-Sep-23	NA	12:42	NA	060°32,00N	064°44,50W	NA	NA	NA	7	-	-	-
	Meadowbank	12-Sep-23	Transect	14:30	14:55	062°30,70N	074°59,70W	062°30,70N	075°19,52W	Moving	1	100% Cloud	None	6
	Meadowbank	13-Sep-23	Transect	13:05	14:00	062°01,60N	084°33,20W	062°06,80N	084°57,40W	Moving	7	Partly Cloudy	None	2
	Meadowbank	14-Sep-23	Transect	14:09	15:00	063°39,30N	091°33,80W	063°43,20N	091°49,40W	Moving	7	Clear	None	1
	Meadowbank	15-Sep-23	Stationary	13:00	14:00	063°56,00N	093°35,00W	063°56,00N	093°35,00W	Stationary	100	Clear	None	1
	Meadowbank	16-Sep-23	Stationary	13:00	14:00	063°56,00N	093°35,00W	063°56,00N	093°35,00W	Stationary	100	Rain	None	3
	Meadowbank	17-Sep-23	Stationary	13:00	14:00	063°56,00N	093°35,00W	063°56,00N	093°35,00W	Stationary	20	100% Cloud	Slight Grey	2
	Meadowbank	18-Sep-23	Stationary	13:00	14:00	063°56,00N	093°35,00W	063°56,00N	093°35,00W	Stationary	5	Fog	Slight Grey	1
	Meadowbank	19-Sep-23	Stationary	13:00	14:00	063°56,00N	093°36,00W	063°56,00N	093°36,00W	Stationary	20	100% Cloud	Slight Grey	3
	Meadowbank	20-Sep-23	Stationary	13:00	14:00	063°56,00N	093°36,00W	063°56,00N	093°36,00W	Stationary	10	100% Cloud	Slight Grey	1
	Meadowbank	21-Sep-23	Stationary	13:00	14:00	063°56,00N	093°35,00W	063°56,00N	093°35,00W	Stationary	5	Fog	Slight Grey	1
	Meadowbank	22-Sep-23	Stationary	13:00	14:00	063°56,00N	093°36,00W	063°56,00N	093°36,00W	Stationary	-	Partly Cloudy	Slight Grey	2
	Meadowbank	23-Sep-23	Transect	13:00	14:00	063°39,00N	091°82,00W	063°35,00N	091°07,00W	Moving	20	100% Cloud	Slight Grey	0
	Meadowbank	24-Sep-23	Transect	13:00	14:00	062°35,00N	081°13,50W	062°39,90N	080°49,20W	Moving	5	Fog	Slight Grey	2
	Meadowbank	25-Sep-23	Transect	13:00	14:00	061°38,00N	069°18,20W	061°32,00N	068°52,00W	Moving	5	Fog	Slight Grey	4
	Meliadine	11-Oct-23	Transect	13:20	14:30	061°25,40N	068°25,10W	061°32,40N	068°55,30W	Moving	20	100% Cloud	Slight Grey	5
	Both	15-Sep-23	Transect	12:15	13:45	061°50,80N	070°26,70W	061°41,20N	069°40,00W	Moving	10	Partly Cloudy	None	2
	Meliadine	12-Oct-23	Transect	17:00	18:00	062°40,00N	080°34,00W	062°39,90N	081°00,00W	Moving	5	Fog	Slight Grey	1
	Meliadine	13-Oct-23	Transect	13:20	14:50	062°24,70N	088°57,60W	062°29,60N	089°49,29W	Moving	18	Partly Cloudy	None	2
	Meliadine	14-Oct-23	Stationary	13:20	14:30	062°46,70N	092°05,60W	062°46,70N	092°05,60W	Stationary	20	Partly Cloudy	Slight Grey	2
	Meliadine	15-Oct-23	Stationary	13:15	14:40	062°46,60N	092°05,40W	062°46,60N	092°05,40W	Stationary	18	Partly Cloudy	Bright	2
	Meliadine	16-Oct-23	Stationary	13:10	13:50	062°46,00N	092°05,00W	062°46,00N	092°05,00W	Stationary	20	Partly Cloudy	Slight Grey	2
	Meliadine	17-Oct-23	Stationary	13:15	14:30	062°46,00N	092°05,00W	062°46,00N	092°05,00W	Stationary	15	Clear	None	2
Meliadine	18-Oct-23	Stationary	13:10	14:50	062°46,00N	092°05,00W	062°46,00N	092°05,00W	Stationary	18	Partly Cloudy	Slight Grey	2	
Meliadine	19-Oct-23	Stationary	13:15	14:30	062°46,40N	092°05,00W	062°46,40N	092°05,00W	Stationary	20	Clear	None	2	
Meliadine	20-Oct-23	Stationary	13:20	14:50	062°46,60N	092°05,00W	062°46,60N	092°05,00W	Stationary	15	Partly Cloudy	Slight Grey	3	
Meliadine	21-Oct-23	Transect	13:10	14:30	062°01,20N	085°03,80W	062°58,90N	084°34,40W	Moving	20	Partly Cloudy	Bright	3	
Meliadine	22-Oct-23	Transect	18:00	19:00	062°10,60N	071°33,50W	062°04,80N	071°09,50W	Moving	20	Clear	None	2	
Meliadine	22-Oct-23	Transect	13:30	15:56	060°07,30N	063°44,01W	059°47,90N	063°03,20W	Moving	20	100% Cloud	Slight Grey	2	



APPENDIX D: MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION, 2023

Survey Target	Project	Date	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	Height of Eye (m)	Species Observed?	Species	Count
Mammals (cont'd)	Meadowbank	13-Aug-23	0.5	Light Wind	-	14	22	Yes	Unknown Seal	1
	Both	07-Aug-23	0.5	Calm	303	13.5	30	No	No Observations	NA
	Both	08-Aug-23	0.5	Calm	102	12	30	No	No Observations	NA
	Both	09-Aug-23	0.1	Calm	101	NA	30	No	No Observations	NA
	Both	10-Aug-23	0.2	Light Wind	-	NA	30	No	No Observations	NA
	Both	11-Aug-23	2	Light Wind	-	NA	30	No	No Observations	NA
	Both	18-Oct-23	-	Light Wind	338	14	-	Yes	Unknown Seal	2
	Both	13-Aug-23	-	Light Wind	-	10.4	-	Yes	Unknown Seal	1
	Both	14-Aug-23	1	Light Wind	60	NA	30	No	No Observations	NA
	Both	15-Aug-23	1	Light Wind	300	NA	30	No	No Observations	NA
	Both	16-Aug-23	1	Light Wind	210	NA	30	No	No Observations	NA
	Both	17-Aug-23	1	Strong Wind	120	NA	30	No	No Observations	NA
	Both	18-Aug-23	1	Light Wind	30	NA	30	No	No Observations	NA
	Both	19-Aug-23	1	Strong Wind	310	NA	30	No	No Observations	NA
	Both	20-Aug-23	1	Light Wind	290	NA	30	No	No Observations	NA
	Both	21-Aug-23	0.5	Calm	300	NA	30	No	No Observations	NA
	Both	22-Aug-23	1	Light Wind	100	NA	30	No	No Observations	NA
	Both	23-Aug-23	1	Light Wind	-	14	30	No	No Observations	NA
	Both	24-Aug-23	1.5	Strong Wind	135	12.9	30	No	No Observations	NA
	Meadowbank	11-Sep-23	1	Light Wind	270	13	30	No	No Observations	NA
	Meadowbank	11-Sep-23	-	Strong Wind	248	9.5	-	Yes	Unknown Seal	15
	Meadowbank	12-Sep-23	3	-	290	12	30	No	No Observations	NA
	Meadowbank	13-Sep-23	0.5	Light Wind	0	13	30	No	No Observations	NA
	Meadowbank	14-Sep-23	0.1	Calm	350	10.9	30	No	No Observations	NA
	Meadowbank	15-Sep-23	1	Light Wind	-	0	30	No	No Observations	NA
	Meadowbank	16-Sep-23	1	Light Wind	183	0	30	No	No Observations	NA
	Meadowbank	17-Sep-23	1	-	177	0	30	No	No Observations	NA
	Meadowbank	18-Sep-23	1	Calm	-	0	30	No	No Observations	NA
	Meadowbank	19-Sep-23	1	-	136	0	30	No	No Observations	NA
	Meadowbank	20-Sep-23	1	Calm	-	0	30	No	No Observations	NA
	Meadowbank	21-Sep-23	1	-	38	0	30	No	No Observations	NA
	Meadowbank	22-Sep-23	1	Light Wind	91	0	30	No	No Observations	NA
	Meadowbank	23-Sep-23	1	Calm	-	13	30	No	No Observations	NA
	Meadowbank	24-Sep-23	1	Strong Wind	201	14	30	No	No Observations	NA
	Meadowbank	25-Sep-23	1	Strong Wind	271	15	30	No	No Observations	NA
	Meliadine	11-Oct-23	3	Gale Force Wind	-	13	30	No	No Observations	NA
	Both	15-Sep-23	1	Light Wind	305	15.3	21	Yes	Unknown Whale	2
	Meliadine	12-Oct-23	0.5	Light Wind	200	13	20	No	No Observations	NA
	Meliadine	13-Oct-23	1	Light Wind	315	13	30	No	No Observations	NA
	Meliadine	14-Oct-23	1	Light Wind	183	0	30	No	No Observations	NA
	Meliadine	15-Oct-23	1	Light Wind	250	0	30	No	No Observations	NA
	Meliadine	16-Oct-23	1	Light Wind	262	0	30	No	No Observations	NA
Meliadine	17-Oct-23	2	Light Wind	97	0	30	No	No Observations	NA	
Meliadine	18-Oct-23	1	Strong Wind	97	0	30	No	No Observations	NA	
Meliadine	19-Oct-23	1	Light Wind	90	0	30	No	No Observations	NA	
Meliadine	20-Oct-23	2	Strong Wind	136	0	30	No	No Observations	NA	
Meliadine	21-Oct-23	2	Strong Wind	-	14	30	No	No Observations	NA	
Meliadine	22-Oct-23	1	Light Wind	270	14	20	No	No Observations	NA	
Meliadine	22-Oct-23	1	Light Wind	191	-	30	No	No Observations	NA	

## APPENDIX E SEABIRD SURVEY DATA, 2023

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale	
Desgagnes	Miena Desgagnes	26-Jun-23	08:30	09:20	00:50	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	-	
	Miena Desgagnes	26-Jun-23	13:00	14:10	01:10	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	-	
	Miena Desgagnes	26-Jun-23	18:15	19:10	00:55	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	-	
	Miena Desgagnes	27-Jun-23	08:30	09:15	00:45	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	Strong Wind	
	Miena Desgagnes	27-Jun-23	12:45	14:30	01:45	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	Strong Wind	
	Miena Desgagnes	27-Jun-23	18:30	19:10	00:40	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	Strong Wind	
	Miena Desgagnes	28-Jun-23	09:00	09:30	00:30	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	1	Light Wind	
	Miena Desgagnes	28-Jun-23	12:50	13:40	00:50	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	1	Light Wind	
	Miena Desgagnes	28-Jun-23	19:15	20:30	01:15	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	1	Light Wind	
	Miena Desgagnes	29-Jun-23	-	-	-	-	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	-
	Miena Desgagnes	29-Jun-23	-	-	-	-	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	-
	Miena Desgagnes	29-Jun-23	-	-	-	-	-	-	-	-	Moving	-	Clear or Partly Cloudy	-	-	-	-
	Miena Desgagnes	30-Jun-23	08:00	-	-	-	-	-	-	-	Moving	-	-	None	-	0.5	Light Wind
	Miena Desgagnes	30-Jun-23	12:50	-	-	-	-	-	-	-	Moving	-	-	None	-	0.5	Light Wind
	Miena Desgagnes	30-Jun-23	19:50	-	-	-	-	-	-	-	Moving	-	-	None	-	0.5	Light Wind
	Miena Desgagnes	1-Jul-23	08:00	-	-	-	-	-	-	-	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	-	0.5	Light Wind
	Miena Desgagnes	1-Jul-23	12:20	-	-	-	-	-	-	-	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	-	0.5	Light Wind
	Miena Desgagnes	1-Jul-23	16:00	-	-	-	-	-	-	-	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	-	0.5	Light Wind
	Miena Desgagnes	3-Jul-23	10:30	12:00	01:30	64.77500153	-92.09666443	64.77500153	-92.09666443	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	1	Light Wind	
	Miena Desgagnes	4-Jul-23	10:00	11:30	01:30	64.77333069	-92.09833527	64.77333069	-92.09833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
	Miena Desgagnes	5-Jul-23	10:00	-	-	64.77333069	-92.09666443	64.77333069	-92.09666443	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind	
	Miena Desgagnes	6-Jul-23	10:00	11:30	01:30	64.77500153	-92.09666443	64.77500153	-92.09666443	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	1	Light Wind	
	Miena Desgagnes	7-Jul-23	10:30	12:00	01:30	64.77500153	-92.09666443	64.77500153	-92.09666443	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
	Miena Desgagnes	8-Jul-23	09:00	10:30	01:30	64.77500153	-92.09666443	64.77500153	-92.09666443	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
	Miena Desgagnes	9-Jul-23	18:07	18:13	00:06	63.375	-82.75166321	63.37166595	-82.73000336	Moving	-	Clear or Partly Cloudy	None	Wavelets	0.5	Strong Wind	
	Miena Desgagnes	9-Jul-23	18:13	18:18	00:05	63.37166595	-82.73000336	63.36833191	-82.69499969	Moving	-	Clear or Partly Cloudy	None	Wavelets	0.5	Strong Wind	
	Miena Desgagnes	9-Jul-23	18:18	18:23	00:05	63.36833191	-82.69499969	63.36333466	-82.65833282	Moving	-	Clear or Partly Cloudy	None	Wavelets	0.5	Strong Wind	
	Miena Desgagnes	9-Jul-23	18:23	18:28	00:05	63.36333466	-82.65833282	63.35833359	-82.61833191	Moving	-	Clear or Partly Cloudy	None	Wavelets	0.5	Strong Wind	
	Miena Desgagnes	9-Jul-23	18:28	18:32	00:04	63.35833359	-82.61833191	63.35499954	-82.59333038	Moving	-	Clear or Partly Cloudy	None	Wavelets	0.5	Strong Wind	
	Miena Desgagnes	9-Jul-23	18:33	18:38	00:05	63.35499954	-82.59333038	63.35166655	-82.56333316	Moving	-	Clear or Partly Cloudy	None	Wavelets	0.5	Strong Wind	
	Miena Desgagnes	10-Jul-23	18:00	18:05	00:05	63.18999863	-75.45999908	63.19166565	-75.45666504	Moving	1	Fog	None	Rippled	0.5	-	
	Miena Desgagnes	10-Jul-23	18:05	18:10	00:05	63.19166565	-75.45666504	63.18999863	-75.44000244	Moving	1	Fog	None	Rippled	0.5	-	
	Miena Desgagnes	10-Jul-23	18:10	18:15	00:05	63.18999863	-75.44000244	63.18999863	-75.41500092	Moving	1	Fog	None	Rippled	0.5	-	
	Miena Desgagnes	10-Jul-23	18:15	18:20	00:05	63.18999863	-75.40666962	63.1883316	-75.39167023	Moving	1	Fog	None	Rippled	0.5	-	
	Miena Desgagnes	10-Jul-23	18:20	18:25	00:05	63.1883316	-75.39167023	63.1866684	-75.38166809	Moving	1	Fog	None	Rippled	0.5	-	
	Miena Desgagnes	10-Jul-23	18:25	18:30	00:05	63.1866684	-75.38166809	63.18500137	-75.36000061	Moving	1	Fog	None	Rippled	0.5	-	
	Miena Desgagnes	11-Jul-23	18:00	18:05	00:05	61.16699982	-68.50150299	-	-	Moving	0	Fog	None	Moderate	3	Gale Force Wind	
	Miena Desgagnes	11-Jul-23	18:05	18:10	00:05	-	-	-	-	Moving	0	Fog	None	Moderate	3	Gale Force Wind	
	Miena Desgagnes	11-Jul-23	18:10	18:15	00:05	-	-	-	-	Moving	0	Fog	None	Moderate	3	Gale Force Wind	
	Miena Desgagnes	11-Jul-23	18:15	18:20	00:05	-	-	-	-	Moving	0	Fog	None	Moderate	3	Gale Force Wind	
Miena Desgagnes	11-Jul-23	18:20	18:25	00:05	-	-	-	-	Moving	0	Fog	None	Moderate	3	Gale Force Wind		
Miena Desgagnes	11-Jul-23	18:25	18:30	00:05	-	-	61.11000061	-68.40333557	Moving	0	Fog	None	Moderate	3	Gale Force Wind		
Desgagnes Transarctic	Miena Desgagnes	30-Jul-23	16:00	16:05	00:05	61.9469986	-68.96533203	61.8718338	-69.00183105	Moving	20	Clear or Partly Cloudy	None	Rippled	0.5	-	
	Miena Desgagnes	30-Jul-23	16:05	16:10	00:05	61.95516586	-69.00183105	61.9628334	-69.03466797	Moving	20	Clear or Partly Cloudy	None	Rippled	0.5	-	
	Miena Desgagnes	30-Jul-23	16:10	16:15	00:05	61.9620018	-69.03466797	61.97066498	-69.06950378	Moving	20	Clear or Partly Cloudy	None	Rippled	0.5	-	
	Miena Desgagnes	30-Jul-23	16:15	16:20	00:05	61.9715004	-69.06950378	61.97900009	-69.10399628	Moving	20	Clear or Partly Cloudy	None	Rippled	0.5	-	
	Miena Desgagnes	30-Jul-23	16:20	16:25	00:05	61.97900009	-69.10399628	61.98716736	-69.14066315	Moving	20	Clear or Partly Cloudy	None	Rippled	0.5	-	
	Miena Desgagnes	30-Jul-23	16:25	16:30	00:05	61.98716736	-69.14066315	62.00149918	-69.20349884	Moving	20	Clear or Partly Cloudy	None	Rippled	0.5	-	
	Miena Desgagnes	31-Jul-23	16:00	16:05	00:05	62.47816849	-79.85383606	62.47216797	-79.9283371	Moving	25	Clear or Partly Cloudy	None	Wavelets	0.5	Calm	
	Miena Desgagnes	31-Jul-23	16:05	16:10	00:05	62.47216797	-79.89499664	62.46966553	-79.92199707	Moving	25	Clear or Partly Cloudy	None	Wavelets	0.5	Calm	
	Miena Desgagnes	31-Jul-23	16:10	16:15	00:05	62.46966553	-79.92199707	62.45750046	-79.95249939	Moving	25	Clear or Partly Cloudy	None	Wavelets	0.5	Calm	
	Miena Desgagnes	31-Jul-23	16:15	16:20	00:05	62.46583176	-79.95249939	62.4620018	-79.98066711	Moving	25	Clear or Partly Cloudy	None	Wavelets	0.5	Calm	
	Miena Desgagnes	31-Jul-23	16:20	16:25	00:05	62.4620018	-79.98066711	62.45650101	-80.01950073	Moving	25	Clear or Partly Cloudy	None	Wavelets	0.5	Calm	
	Miena Desgagnes	31-Jul-23	16:25	16:30	00:05	62.45566559	-80.01833344	62.36966705	-80.04366302	Moving	25	Clear or Partly Cloudy	None	Wavelets	0.5	Calm	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes Transarctik (cont'd)	Miena Desgagnes	1-Aug-23	16:00	16:05	00:05	63.05849838	-89.18766785	63.0644989	-89.22816467	Moving	-	Clear or Partly Cloudy	None	Glassy	0	Calm
	Miena Desgagnes	1-Aug-23	16:05	16:10	00:05	63.0644989	-89.22816467	63.07066727	-89.25350189	Moving	-	Clear or Partly Cloudy	None	Glassy	0	Calm
	Miena Desgagnes	1-Aug-23	16:10	16:15	00:05	63.07066727	-89.25350189	63.07766724	-89.29166412	Moving	-	Clear or Partly Cloudy	None	Glassy	0	Calm
	Miena Desgagnes	1-Aug-23	16:15	16:20	00:05	63.07766724	-89.29166412	63.07383347	-89.31632996	Moving	-	Clear or Partly Cloudy	None	Glassy	0	Calm
	Miena Desgagnes	1-Aug-23	16:20	16:25	00:05	63.08216476	-89.31632996	63.08883286	-89.35166931	Moving	-	Clear or Partly Cloudy	None	Glassy	0	Calm
	Miena Desgagnes	1-Aug-23	16:25	16:30	00:05	63.08883286	-89.35166931	63.09550095	-89.38833618	Moving	-	Clear or Partly Cloudy	None	Glassy	0	Calm
	Miena Desgagnes	3-Aug-23	13:30	15:00	01:30	63.94166565	-93.60333252	63.94166565	-93.60333252	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Miena Desgagnes	4-Aug-23	12:30	14:00	01:30	63.94166565	-93.60666656	63.94166565	-93.60666656	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Miena Desgagnes	5-Aug-23	14:00	15:30	01:30	63.94166565	-93.60333252	63.94166565	-93.60333252	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.1	Light Wind
	Miena Desgagnes	6-Aug-23	12:00	13:30	01:30	63.94166565	-93.60832977	65.94166565	-93.60832977	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.1	Light Wind
	Miena Desgagnes	7-Aug-23	10:30	12:00	01:30	63.93999863	-93.61000061	63.93999863	-93.61000061	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.2	Light Wind
	Miena Desgagnes	8-Aug-23	12:00	13:30	01:30	63.93999863	-93.60832977	63.93999863	-93.60832977	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Miena Desgagnes	9-Aug-23	12:30	14:00	01:30	63.93999863	-93.60832977	63.93999863	-93.60832977	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Miena Desgagnes	12-Aug-23	09:15	09:20	00:05	62.01666641	-83.59166718	62.01666641	-83.55999756	Moving	1	Fog	None	Wavelets	1	Light Wind
	Miena Desgagnes	12-Aug-23	09:20	09:25	00:05	62.01666641	-83.59166718	62.01666641	-83.52333069	Moving	1	Fog	None	Wavelets	1	Light Wind
	Miena Desgagnes	12-Aug-23	09:25	09:30	00:05	62.01666641	-83.52333069	62.01666641	-83.48332977	Moving	1	Fog	None	Wavelets	1	Light Wind
	Miena Desgagnes	12-Aug-23	09:30	09:35	00:05	62.01666641	-83.48332977	62.01666641	-83.3666687	Moving	1	Fog	None	Wavelets	1	Light Wind
	Miena Desgagnes	12-Aug-23	09:35	09:40	00:05	62.01666641	-83.44333649	62.01333237	-83.40499878	Moving	1	Fog	None	Wavelets	1	Light Wind
	Miena Desgagnes	12-Aug-23	09:40	09:45	00:05	62.01333237	-83.40000153	62.01166534	-83.35666656	Moving	1	Fog	None	Wavelets	1	Light Wind
	Miena Desgagnes	13-Aug-23	09:15	09:20	00:05	62.21166611	-71.86166382	62.20166779	-71.81500244	Moving	30	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	13-Aug-23	09:20	09:25	00:05	62.28333282	-71.8116684	62.19499969	-71.77833557	Moving	30	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	13-Aug-23	09:25	09:30	00:05	62.19333267	-71.77500153	62.18333435	-71.72499847	Moving	30	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	13-Aug-23	09:30	09:35	00:05	62.18166733	-71.72000122	62.17833328	-71.70333099	Moving	30	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	13-Aug-23	09:35	09:40	00:05	62.01783371	-71.70333099	62.17166519	-71.66666412	Moving	30	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	13-Aug-23	09:40	09:45	00:05	62.16716766	-71.65133667	-	-	Moving	30	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	4-Sep-23	12:20	12:25	00:05	60.94333267	-66.62666321	60.95999908	-66.64499664	Moving	10	Cloudy	None	Rough	3	Strong Wind
	Miena Desgagnes	4-Sep-23	12:25	12:30	00:05	60.95000076	-66.64499664	60.95833206	-66.68333435	Moving	10	Cloudy	None	Rough	3	Strong Wind
	Miena Desgagnes	4-Sep-23	12:30	12:35	00:05	60.95833206	-66.68333435	60.96666718	-66.72000122	Moving	10	Cloudy	None	Rough	3	Strong Wind
	Miena Desgagnes	4-Sep-23	12:35	12:40	00:05	60.96666718	-66.72000122	60.97333145	-66.7416687	Moving	10	Cloudy	None	Rough	3	Strong Wind
	Miena Desgagnes	4-Sep-23	12:40	12:45	00:05	60.97333145	-66.7416687	60.98333359	-66.77999878	Moving	10	Cloudy	None	Rough	3	Strong Wind
	Miena Desgagnes	4-Sep-23	12:45	12:50	00:05	60.90000153	-66.77999878	60.99000168	-66.80666351	Moving	10	Cloudy	None	Rough	3	Strong Wind
	Miena Desgagnes	5-Sep-23	12:15	12:20	00:05	62.57666779	-75.40166473	62.57833481	-75.43333435	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	5-Sep-23	12:20	12:25	00:05	62.57833481	-75.43333435	62.57833481	-75.46833038	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	5-Sep-23	12:25	12:30	00:05	62.57833481	-75.46833038	62.58000183	-75.5	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	5-Sep-23	12:30	12:35	00:05	62.58000183	-75.5	62.58166504	-75.53500366	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	5-Sep-23	12:35	12:40	00:05	62.58166504	-75.53500366	62.58333206	-75.57333374	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	5-Sep-23	12:40	12:45	00:05	62.58333206	-75.57333374	62.58499908	-75.61333466	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	6-Sep-23	12:20	12:25	00:05	62.19166565	-85.98666382	62.19499969	-86.03166962	Moving	10	Clear or Partly Cloudy	None	Moderate	2	Light Wind
	Miena Desgagnes	6-Sep-23	12:25	12:30	00:05	62.19499969	-86.03166962	62.19833374	-86.05999756	Moving	10	Clear or Partly Cloudy	None	Moderate	2	Light Wind
	Miena Desgagnes	6-Sep-23	12:30	12:35	00:05	62.19833374	-86.05999756	62.20166779	-86.10333252	Moving	10	Clear or Partly Cloudy	None	Moderate	2	Light Wind
	Miena Desgagnes	6-Sep-23	12:35	-	-	62.20166779	-86.10333252	62.20500183	-86.1333313	Moving	10	Clear or Partly Cloudy	None	Moderate	2	Light Wind
	Miena Desgagnes	6-Sep-23	12:40	12:45	00:05	62.20500183	-86.1333313	62.20666504	-86.16500092	Moving	10	Clear or Partly Cloudy	None	Moderate	2	Light Wind
	Miena Desgagnes	6-Sep-23	12:45	12:50	00:05	62.20666504	-86.16500092	62.20999908	-86.20166779	Moving	10	Clear or Partly Cloudy	None	Moderate	2	Light Wind
	Miena Desgagnes	7-Sep-23	12:25	12:30	00:05	62.77833176	-92.09166718	62.77833176	-92.09166718	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Strong Wind
	Miena Desgagnes	7-Sep-23	12:30	12:35	00:05	62.77833176	-92.09166718	62.77833176	-92.09166718	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Strong Wind
	Miena Desgagnes	7-Sep-23	12:35	12:40	00:05	62.77833176	-92.09166718	62.77833176	-92.09166718	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Strong Wind
	Miena Desgagnes	7-Sep-23	12:40	12:45	00:05	62.77833176	-92.09166718	62.77833176	-92.09166718	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Strong Wind
	Miena Desgagnes	7-Sep-23	12:45	12:50	00:05	62.77833176	-92.09166718	62.77833176	-92.09166718	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Strong Wind
	Miena Desgagnes	7-Sep-23	12:50	12:55	00:05	62.77833176	-92.09166718	62.77833176	-92.09166718	Stationary	10	Clear or Partly Cloudy	None	Wavelets	1	Strong Wind
	Miena Desgagnes	8-Sep-23	12:20	12:25	00:05	63.9366684	-93.61000061	63.9366684	-93.61000061	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
Miena Desgagnes	8-Sep-23	12:25	12:30	00:05	63.9366684	-93.61000061	63.9366684	-93.61000061	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind	
Miena Desgagnes	8-Sep-23	12:30	12:35	00:05	63.9366684	-93.61000061	63.9366684	-93.61000061	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind	
Miena Desgagnes	8-Sep-23	12:35	12:40	00:05	63.9366684	-93.61000061	63.9366684	-93.61000061	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind	
Miena Desgagnes	8-Sep-23	12:40	12:45	00:05	63.9366684	-93.61000061	63.9366684	-93.61000061	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes Transarctik (cont'd)	Miena Desgagnes	8-Sep-23	12:45	12:50	00:05	63.9366684	-93.61000061	63.9366684	-93.61000061	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	9-Sep-23	12:25	12:30	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	9-Sep-23	12:30	12:35	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	9-Sep-23	12:35	12:40	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	9-Sep-23	12:40	12:45	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	9-Sep-23	12:45	12:50	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	9-Sep-23	12:50	12:55	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	10-Sep-23	12:15	12:20	00:05	63.93500137	-93.60500336	63.93500137	-93.60500336	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Miena Desgagnes	10-Sep-23	12:20	12:25	00:05	63.93500137	-93.60500336	63.93500137	-93.60500336	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Miena Desgagnes	10-Sep-23	12:25	12:30	00:05	63.93500137	-93.60500336	63.93500137	-93.60500336	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Miena Desgagnes	10-Sep-23	12:30	12:35	00:05	63.93500137	-93.60500336	63.93500137	-93.60500336	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Miena Desgagnes	10-Sep-23	12:35	12:40	00:05	63.93500137	-93.60500336	63.93500137	-93.60500336	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Miena Desgagnes	10-Sep-23	12:40	12:45	00:05	63.93500137	-93.60500336	63.93500137	-93.60500336	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Miena Desgagnes	11-Sep-23	12:20	12:25	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	1	Light Wind
	Miena Desgagnes	11-Sep-23	12:25	12:30	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	1	Light Wind
	Miena Desgagnes	11-Sep-23	12:30	12:35	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	1	Light Wind
	Miena Desgagnes	11-Sep-23	12:35	12:40	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	1	Light Wind
	Miena Desgagnes	11-Sep-23	12:40	12:45	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	1	Light Wind
	Miena Desgagnes	11-Sep-23	12:45	12:50	00:05	63.9383316	-93.60500336	63.9383316	-93.60500336	Stationary	10	Cloudy	None	Wavelets	1	Light Wind
	Miena Desgagnes	14-Sep-23	12:20	12:25	00:05	62.03333282	-83.00499725	62.03666687	-82.96833038	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Miena Desgagnes	14-Sep-23	12:25	12:30	00:05	62.03666687	-82.96833038	62.04333496	-82.92500305	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Miena Desgagnes	14-Sep-23	12:30	12:35	00:05	62.04333496	-82.92500305	62.04833221	-82.8833313	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Miena Desgagnes	14-Sep-23	12:35	12:40	00:05	62.04833221	-82.8833313	62.05166626	-82.85166931	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Miena Desgagnes	14-Sep-23	12:40	12:45	00:05	62.05166626	-82.85166931	62.05833435	-82.80833435	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Miena Desgagnes	14-Sep-23	12:45	12:50	00:05	62.05833435	-82.80833435	62.06499863	-82.76499939	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Miena Desgagnes	15-Sep-23	12:20	12:25	00:05	61.84666824	-70.4466629	61.83499908	-70.39499664	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Calm
	Miena Desgagnes	15-Sep-23	12:25	12:30	00:05	61.83499908	-70.39499664	61.82666779	-70.36000061	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Calm
	Miena Desgagnes	15-Sep-23	12:30	12:35	00:05	61.82666779	-70.36000061	61.81666565	-70.31666565	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Calm
	Miena Desgagnes	15-Sep-23	12:35	12:40	00:05	61.81666565	-70.31666565	61.80833435	-70.29833221	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Calm
	Miena Desgagnes	15-Sep-23	12:40	12:45	00:05	61.80833435	-70.29833221	61.79833221	-70.23666382	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Calm
Miena Desgagnes	15-Sep-23	12:45	12:50	00:05	61.79833221	-70.23666382	61.78666687	-70.1866684	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	
Desgagnes	Miena Desgagnes	2-Oct-23	14:00	14:05	00:05	60.36666489	-63.75333405	60.37666702	-63.79999924	Moving	10	Cloudy	None	Slight	1.2	Strong Wind
	Miena Desgagnes	2-Oct-23	14:15	14:20	00:05	60.38999939	-63.78833389	60.40000153	-63.79999924	Moving	10	Cloudy	None	Slight	1.2	Strong Wind
	Miena Desgagnes	2-Oct-23	14:20	14:25	00:05	60.40000153	-63.79999924	60.41166687	-63.81666565	Moving	10	Cloudy	None	Slight	1.2	Strong Wind
	Miena Desgagnes	3-Oct-23	14:10	14:15	00:05	62.69833374	-72.05833435	62.70333481	-72.07333374	Moving	10	Cloudy	None	Moderate	3	Strong Wind
	Miena Desgagnes	3-Oct-23	14:25	14:30	00:05	62.70999908	-72.15499878	62.71500015	-72.19833374	Moving	10	Cloudy	None	Moderate	3	Strong Wind
	Miena Desgagnes	3-Oct-23	14:30	14:35	00:05	62.71500015	-72.19833374	62.72000122	-72.23500061	Moving	10	Cloudy	None	Moderate	3	Strong Wind
	Miena Desgagnes	4-Oct-23	14:25	14:30	00:05	63.03499985	-83.86000061	63.03166658	-83.92666626	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	4-Oct-23	14:40	14:45	00:05	63.02833176	-83.99333191	63.02666855	-84.03333282	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	4-Oct-23	14:45	14:50	00:05	63.02666855	-84.03333282	63.02333345	-84.08666992	Moving	10	Cloudy	None	Moderate	2	Strong Wind
	Miena Desgagnes	5-Oct-23	16:25	16:30	00:05	63.55666733	-91.05166626	63.56666565	-91.0633316	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	5-Oct-23	16:40	16:45	00:05	63.05883408	-91.11000061	63.59000015	-92.13999939	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	5-Oct-23	16:45	16:50	00:05	63.59000015	-91.13999939	63.59166718	-91.17500305	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	7-Oct-23	10:00	11:30	01:30	63.93166733	-93.62000275	63.93166733	-93.62000275	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind
	Miena Desgagnes	8-Oct-23	13:15	13:20	00:05	63.71666718	-91.93499756	63.7183342	-91.88833618	Moving	10	Cloudy	None	Wavelets	-1	Light Wind
	Miena Desgagnes	8-Oct-23	13:30	13:35	00:05	63.72333145	-91.81517029	63.7183342	-91.76833344	Moving	10	Cloudy	None	Wavelets	-1	Light Wind
	Miena Desgagnes	8-Oct-23	13:35	13:40	00:05	63.7183342	-91.76833344	63.71500015	-91.71833038	Moving	10	Cloudy	None	Wavelets	-1	Light Wind
	Miena Desgagnes	10-Oct-23	13:00	14:30	01:30	62.75666809	-93.0716629	62.75666809	-92.0716629	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Slight	0.4	-
	Miena Desgagnes	11-Oct-23	11:00	12:30	01:30	62.76666641	-93.06666565	62.76666641	-92.06666565	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.25	Light Wind
	Miena Desgagnes	12-Oct-23	13:00	14:30	01:30	62.76666641	-92.0633316	62.76666641	-92.0633316	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.1	Light Wind
	Miena Desgagnes	13-Oct-23	11:00	12:30	01:30	62.76499939	-92.06500244	62.76499939	-92.06500244	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.18	Light Wind
	Miena Desgagnes	15-Oct-23	09:00	10:30	01:30	62.76499939	-92.0616684	62.76499939	-92.0616684	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.15	Light Wind
	Miena Desgagnes	16-Oct-23	09:30	09:35	00:05	62.15833282	-85.6883316	62.15499878	-88.62833405	-	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	16-Oct-23	10:00	10:05	00:05	62.13833237	-85.4366684	62.13333511	-85.3833313	-	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes <i>(cont'd)</i>	Miena Desgagnes	16-Oct-23	10:10	10:15	00:05	62.13166809	-85.35166931	62.13000107	-85.3116684	-	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	17-Oct-23	09:30	09:35	00:05	62.5316658	-74.04333496	62.5316658	-74.01166534	Moving	1	Fog	None	Rippled	1	Calm
	Miena Desgagnes	17-Oct-23	10:00	10:05	00:05	62.52500153	-73.83499908	62.5233345	-73.77166748	Moving	1	Fog	None	Rippled	1	Calm
	Miena Desgagnes	17-Oct-23	10:10	10:15	00:05	62.52166748	-73.7416687	62.52166748	-73.70833588	Moving	1	Fog	None	Rippled	1	Calm
	Miena Desgagnes	18-Oct-23	10:00	10:05	00:05	60.36999893	-63.8516655	60.35666656	-63.83833313	Moving	10	Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	18-Oct-23	10:15	10:20	00:05	60.31750107	-63.80066681	60.30016708	-63.76816559	Moving	10	Cloudy	None	Rippled	1	Light Wind
	Miena Desgagnes	18-Oct-23	10:20	10:25	00:05	60.29666519	-63.77666855	60.28666687	-63.76333237	Moving	10	Cloudy	None	Rippled	1	Light Wind
Woodwards	Tuvaq W.	21-Jul-23	12:10	12:15	00:05	63.92166519	-93.94000244	63.91833496	-93.95500183	Moving	10	Cloudy	Slight/ Grey	Slight	0.2	Strong Wind
	Tuvaq W.	21-Jul-23	12:20	12:25	00:05	63.91833496	-93.97000122	63.92333221	-93.98332977	Moving	10	Cloudy	Slight/ Grey	Slight	0.2	Strong Wind
	Tuvaq W.	21-Jul-23	12:30	12:35	00:05	63.93000031	-93.99666595	63.93500137	-94.01166534	Moving	10	Cloudy	Slight/ Grey	Slight	0.2	Strong Wind
	Tuvaq W.	21-Jul-23	12:40	12:45	00:05	63.94166565	-94.02500153	63.94833374	-95.37333679	Moving	10	Cloudy	Slight/ Grey	Slight	0.2	Strong Wind
	Tuvaq W.	21-Jul-23	12:50	12:55	00:05	63.95333481	-94.05666351	63.96333313	-94.06666565	Moving	10	Cloudy	Slight/ Grey	Slight	0.2	Strong Wind
	Tuvaq W.	21-Jul-23	13:00	13:05	00:05	63.97333145	-94.07499695	63.97999954	-94.09333038	Moving	10	Cloudy	Slight/ Grey	Slight	0.2	Strong Wind
	Tuvaq W.	22-Jul-23	14:16	14:21	00:05	63.99499893	-94.24333191	63.99333191	-94.26166534	Moving	10	Clear or Partly Cloudy	None	Wavelets	0.2	Strong Wind
	Tuvaq W.	22-Jul-23	14:27	14:32	00:05	63.99333191	-94.27833557	63.99333191	-94.29166412	Moving	10	Clear or Partly Cloudy	None	Wavelets	0.2	Strong Wind
	Tuvaq W.	22-Jul-23	14:36	14:41	00:05	63.99333191	-95.3666687	63.99499893	-94.31999969	Moving	10	Clear or Partly Cloudy	None	Wavelets	0.2	Strong Wind
	Tuvaq W.	22-Jul-23	14:55	15:00	00:05	64.03333282	-94.30999756	64.04666901	-94.33499908	Moving	10	Clear or Partly Cloudy	None	Wavelets	0.2	Strong Wind
	Tuvaq W.	22-Jul-23	15:03	15:08	00:05	64.0533371	-94.34833527	64.0616684	-94.37166595	Moving	10	Clear or Partly Cloudy	None	Wavelets	0.2	Strong Wind
	Tuvaq W.	22-Jul-23	15:10	15:15	00:05	64.06666565	-94.37833405	64.08166504	-94.37999725	Moving	10	Clear or Partly Cloudy	None	Wavelets	0.2	Strong Wind
	Tuvaq W.	23-Jul-23	03:56	04:01	00:05	63.95500183	-94.05666351	63.94333267	-94.02666473	Moving	10	Clear or Partly Cloudy	None	Wavelets	0	Light Wind
	Tuvaq W.	23-Jul-23	04:03	04:08	00:05	63.9383316	-94.01999664	63.92666626	-93.98833466	Moving	10	Clear or Partly Cloudy	None	Wavelets	0	Light Wind
	Tuvaq W.	23-Jul-23	04:10	04:15	00:05	63.92166519	-93.97666931	63.92333221	-93.93499756	Moving	10	Clear or Partly Cloudy	None	Wavelets	0	Light Wind
	Tuvaq W.	23-Jul-23	04:17	04:22	00:05	63.92666626	-93.91666412	63.93333435	-93.87333679	Moving	10	Clear or Partly Cloudy	None	Wavelets	0	Light Wind
	Tuvaq W.	23-Jul-23	04:24	04:29	00:05	63.93500137	-93.86000061	63.94333267	-93.82499695	Moving	10	Clear or Partly Cloudy	None	Wavelets	0	Light Wind
	Tuvaq W.	23-Jul-23	04:31	04:36	00:05	63.94833374	-93.8116684	63.95500183	-93.77333069	Moving	10	Clear or Partly Cloudy	None	Wavelets	0	Light Wind
	Tuvaq W.	23-Jul-23	14:20	14:25	00:05	63.96166611	-94.06500244	63.97333145	-94.07666779	Moving	10	Cloudy	Slight/ Grey	Glassy	0	Calm
	Tuvaq W.	23-Jul-23	14:27	14:32	00:05	63.9766655	-94.08333588	63.98333359	-94.10500336	Moving	10	Cloudy	Slight/ Grey	Glassy	0	Calm
	Tuvaq W.	23-Jul-23	14:34	14:39	00:05	63.98666763	-94.11333466	63.99000168	-94.13999939	Moving	10	Cloudy	Slight/ Grey	Glassy	0	Calm
	Tuvaq W.	23-Jul-23	14:41	14:46	00:05	63.99000168	-94.15166473	63.99166489	-94.17333221	Moving	10	Cloudy	Slight/ Grey	Glassy	0	Calm
	Tuvaq W.	23-Jul-23	14:48	14:53	00:05	63.99333191	-94.18000031	63.99666595	-94.20500183	Moving	10	Cloudy	Slight/ Grey	Glassy	0	Calm
	Tuvaq W.	23-Jul-23	15:00	15:05	00:05	63.99499893	-94.23000336	63.99499893	-94.25166321	Moving	10	Cloudy	Slight/ Grey	Glassy	0	Calm
	Tuvaq W.	24-Jul-23	03:55	04:00	00:05	63.99166489	-94.27666473	63.99499893	-94.25	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	24-Jul-23	04:12	04:17	00:05	63.99333191	-94.18333435	63.99166489	-94.15833282	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	24-Jul-23	04:20	04:25	00:05	63.99000168	-94.14333344	63.99499893	-94.11166382	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	24-Jul-23	04:31	04:36	00:05	63.97833252	-94.08666992	63.96666718	-94.06833649	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	24-Jul-23	04:38	04:43	00:05	63.95833206	-94.0633316	63.94666672	-94.03500366	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	24-Jul-23	04:46	04:51	00:05	63.9383316	-94.01667023	63.92666626	-93.98666382	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	25-Jul-23	04:10	04:15	00:05	64	-94.32499695	63.99499893	-94.31833649	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	25-Jul-23	04:23	04:28	00:05	63.99333191	-94.29833221	63.99166489	-94.27999878	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	25-Jul-23	04:39	04:44	00:05	63.99499893	-94.23166656	63.99666595	-94.20333099	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	25-Jul-23	04:47	04:52	00:05	63.99333191	-94.18499756	63.99166489	-94.15499878	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	25-Jul-23	05:02	05:07	00:05	63.98500061	-94.10666656	63.9766655	-94.07833099	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	25-Jul-23	05:11	05:16	00:05	63.96666718	-94.06833649	63.95000076	-94.04333496	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.1	Light Wind
	Tuvaq W.	26-Jul-23	04:17	04:22	00:05	63.97833252	-94.08833313	63.98666763	-94.11833191	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Calm
	Tuvaq W.	26-Jul-23	04:26	04:31	00:05	63.98833466	-94.13500214	63.99166489	-94.16333008	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Calm
	Tuvaq W.	26-Jul-23	04:33	04:38	00:05	63.99166489	-94.17500305	63.99666595	-94.19999695	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Calm
	Tuvaq W.	26-Jul-23	04:43	04:48	00:05	63.99499893	-94.22166443	63.99499893	-94.24833679	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Calm
	Tuvaq W.	26-Jul-23	05:07	05:12	00:05	63.99333191	-94.30500031	63.99833298	-94.31833649	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Calm
	Tuvaq W.	26-Jul-23	05:20	05:25	00:05	64.02166748	-94.31666565	64.03500366	-94.3116684	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Calm
Tuvaq W.	27-Jul-23	05:27	05:32	00:05	64.02666473	-94.31666565	64.01999664	-94.32333374	Moving	10	Cloudy	Slight/ Grey	Wavelets	0.1	Strong Wind	
Tuvaq W.	27-Jul-23	05:33	05:38	00:05	64.01999664	-94.32499695	64.01166534	-94.32499695	Moving	10	Cloudy	Slight/ Grey	Wavelets	0.1	Strong Wind	
Tuvaq W.	27-Jul-23	05:45	05:50	00:05	64.00499725	-94.32666779	64	-94.32666779	Moving	10	Cloudy	Slight/ Grey	Wavelets	0.1	Strong Wind	
Tuvaq W.	27-Jul-23	05:51	05:56	00:05	64.00166321	-94.32666779	63.99499893	-94.31999969	Moving	10	Cloudy	Slight/ Grey	Wavelets	0.1	Strong Wind	
Tuvaq W.	27-Jul-23	05:57	06:02	00:05	63.99499893	-94.31666565	63.99333191	-94.3033371	Moving	10	Cloudy	Slight/ Grey	Wavelets	0.1	Strong Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Woodwards <i>(cont'd)</i>	Tuvaq W.	27-Jul-23	06:03	06:08	00:05	63.99333191	-94.30000305	63.99166489	-94.27999878	Moving	10	Cloudy	Slight/ Grey	Wavelets	0.1	Strong Wind
	Tuvaq W.	27-Jul-23	20:00	20:05	00:05	64.13500214	-94.69000244	64.13833618	-94.73166656	Moving	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.3	Light Wind
	Tuvaq W.	27-Jul-23	20:06	20:11	00:05	64.13999939	-94.74333191	64.14499664	-94.77333069	Moving	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.3	Light Wind
	Tuvaq W.	27-Jul-23	20:18	20:23	00:05	64.15183258	-94.83166504	64.15699768	-94.86733246	Moving	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.3	Light Wind
	Tuvaq W.	27-Jul-23	20:27	20:32	00:05	64.15950012	-94.90583038	64.16432953	-94.94516754	Moving	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.3	Light Wind
	Tuvaq W.	27-Jul-23	20:40	20:45	00:05	64.17066956	-95.01650238	64.17466736	-95.03583527	Moving	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.3	Light Wind
	Tuvaq W.	27-Jul-23	15:11	15:16	00:05	63.98500061	-94.10500336	63.98833466	-94.12833405	Moving	10	Clear or Partly Cloudy	None	Moderate	0.3	Strong Wind
	Tuvaq W.	27-Jul-23	15:21	15:26	00:05	63.99166489	-94.15666962	63.99333191	-94.18000031	Moving	10	Clear or Partly Cloudy	None	Moderate	0.3	Strong Wind
	Tuvaq W.	27-Jul-23	15:28	15:33	00:05	63.99499893	-94.19000244	63.99666595	-94.20999908	Moving	10	Clear or Partly Cloudy	None	Moderate	0.3	Strong Wind
	Tuvaq W.	27-Jul-23	15:36	15:41	00:05	63.99666595	-94.22166443	63.99499893	-94.24166687	Moving	10	Clear or Partly Cloudy	None	Moderate	0.3	Strong Wind
	Tuvaq W.	27-Jul-23	15:44	15:49	00:05	63.99499893	-94.25499725	63.99333191	-94.26999664	Moving	10	Clear or Partly Cloudy	None	Moderate	0.3	Strong Wind
Tuvaq W.	27-Jul-23	16:00	16:05	00:05	63.99333191	-94.30166626	63.99499893	-94.31833649	Moving	10	Clear or Partly Cloudy	None	Moderate	0.3	Strong Wind	
Desgagnes	Marcellin A. Desgagnes	18-Oct-23	15:20	15:25	00:05	61.75999832	-69.0083313	61.76666641	-69.11499786	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	18-Oct-23	15:30	15:35	00:05	61.77166748	-69.13999939	61.77999878	-69.18000031	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	18-Oct-23	15:40	15:45	00:05	61.78833389	-69.22000122	61.79000092	-69.23999786	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	18-Oct-23	15:50	15:55	00:05	61.81000137	-69.27999878	61.83000183	-69.29000092	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	10:15	10:20	00:05	62.65000153	-77.41000366	62.65999985	-77.44999695	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	10:25	10:30	00:05	62.6566658	-77.48000336	62.65000153	-77.51000214	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	10:35	10:40	00:05	62.68000031	-77.55999756	62.68999863	-77.59999847	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	10:45	10:50	00:05	62.65999985	-77.63999939	62.65999985	-77.80999756	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	10:55	11:00	00:05	62.66999817	-77.84999847	62.68000031	-77.86000061	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	11:05	11:10	00:05	62.65999985	-77.77999878	62.66999817	-77.79000092	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	13:00	13:05	00:05	62.70000076	-78.77999878	62.70999908	-78.81999969	Moving	10	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	13:10	13:15	00:05	62.70166779	-78.87999725	62.70000076	-78.93000031	Moving	10	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	13:20	13:25	00:05	62.68999863	-78.95999908	62.68999863	-79	Moving	10	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	13:30	13:35	00:05	62.69499969	-79.05000305	62.68000031	-79.12000275	Moving	10	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	13:40	13:45	00:05	62.66999817	-79.16000366	62.67666626	-79.19999695	Moving	10	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	19-Oct-23	13:50	13:55	00:05	62.66999817	-79.23999786	62.68000031	-79.26000214	Moving	10	Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	20-Oct-23	13:00	13:05	00:05	62.49000168	-89.89499664	62.49000168	-89.94000244	Moving	10	Cloudy	None	Rippled	0	Strong Wind
	Marcellin A. Desgagnes	20-Oct-23	13:10	13:15	00:05	62.5	-89.98999786	62.50999832	-90	Moving	10	Cloudy	None	Rippled	0	Strong Wind
	Marcellin A. Desgagnes	20-Oct-23	13:20	13:25	00:05	62.5	-90	62.50999832	-90.09500122	Moving	10	Cloudy	None	Rippled	0	Strong Wind
	Marcellin A. Desgagnes	20-Oct-23	13:50	13:55	00:05	62.52000046	-90.26999664	62.52999878	-90.27999878	Moving	10	Cloudy	None	Rippled	0	Strong Wind
	Marcellin A. Desgagnes	20-Oct-23	13:30	13:35	00:05	62.52999878	-90.09833527	62.54999924	-90.09999847	Moving	10	Cloudy	None	Rippled	0	Strong Wind
	Marcellin A. Desgagnes	20-Oct-23	13:40	13:45	00:05	62.56000137	-90.19999695	62.52000046	-90.23999786	Moving	10	Cloudy	None	Rippled	0	Strong Wind
	Marcellin A. Desgagnes	21-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	21-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	21-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	21-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	21-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	21-Oct-23	22:45	22:50	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	22-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	22-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	22-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	22-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	22-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
Marcellin A. Desgagnes	22-Oct-23	22:50	22:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	23-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	23-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	23-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	24-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	24-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	24-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	24-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin A. Desgagnes	24-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Marcellin A. Desgagnes	24-Oct-23	22:50	22:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	25-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	25-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	25-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	25-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	25-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	25-Oct-23	22:50	22:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	26-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	26-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	26-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	26-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	26-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	26-Oct-23	22:50	22:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	27-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	27-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	27-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	27-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	27-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	27-Oct-23	22:50	22:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	28-Oct-23	22:00	22:05	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	28-Oct-23	22:10	22:15	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	28-Oct-23	22:20	22:25	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	28-Oct-23	22:30	22:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	28-Oct-23	22:40	22:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	28-Oct-23	22:50	22:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Light Wind
	Marcellin A. Desgagnes	30-Oct-23	15:30	15:35	00:05	62.4683342	-89.55000305	62.46500015	-89.51999664	Moving	8	Snow	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	30-Oct-23	15:40	15:45	00:05	62.45999908	-89.48666382	62.47000122	-89.44499969	Moving	8	Snow	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	30-Oct-23	15:50	15:55	00:05	62.45500183	-89.37999725	62.45000076	-89.33999634	Moving	8	Snow	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	30-Oct-23	16:00	16:05	00:05	62.43999863	-89.30999756	62.44333267	-89.26000214	Moving	8	Snow	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	30-Oct-23	16:10	16:15	00:05	62.43999863	-89.23000336	62.43000031	-89.19333649	Moving	8	Snow	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	30-Oct-23	16:20	16:25	00:05	62.43000031	-89.15000153	62.41999817	-89	Moving	8	Snow	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	13:00	13:05	00:05	62.45000076	-80.30999756	62.45999908	-80.29499817	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	13:10	13:15	00:05	62.47000122	-80.29000092	62.47000122	-80.27999878	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	13:20	13:25	00:05	62.47999954	-80.27999878	62.47999954	-80.27833557	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	13:50	13:55	00:05	62.50999832	-80	62.52000046	-80	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	13:30	13:35	00:05	62.49000168	-80.16000366	62.5	-80.15000153	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	13:40	13:45	00:05	62.50999832	-80.09999847	62.50999832	-80.06999969	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	16:00	16:05	00:05	62.65000153	-79.39833069	62.65999985	-79.37000275	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	16:10	16:15	00:05	62.66500092	-79.33999634	62.66999817	-79.30999756	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	16:20	16:25	00:05	62.67499924	-79.29000092	62.67833328	-79.26000214	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	16:30	16:35	00:05	62.68000031	-79.23000336	62.68166733	-79.19999695	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	16:40	16:45	00:05	62.68999863	-79.18000031	62.70000076	-79.16833496	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	31-Oct-23	16:50	16:55	00:05	62.77999878	-79.13999939	62.79000092	-79.12999725	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	1-Nov-23	13:00	13:05	00:05	61.4383316	-69.76000214	61.41999817	-69.73000336	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin A. Desgagnes	1-Nov-23	13:10	13:15	00:05	61.40999985	-69.69999695	61.40999985	-69.67500305	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
Marcellin A. Desgagnes	1-Nov-23	13:20	13:25	00:05	61.38999939	-69.63999939	61.38000107	-69.61000061	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	13:30	13:35	00:05	61.37666702	-69.56999969	61.36500168	-69.52999878	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	13:40	13:45	00:05	61.34999847	-69.5	61.34000015	-69.47499847	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	13:50	13:55	00:05	61.33000183	-69.43499756	61.31999969	-69.41000366	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	16:00	16:05	00:05	61.08000183	-68.5	61.08000183	-68.45999908	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	16:10	16:15	00:05	61.00833511	-68.42500305	61.00666809	-68.37999725	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	16:20	16:25	00:05	61.00666809	-68.34999847	61.00666809	-68.30999756	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	16:30	16:35	00:05	61.06000137	-68.26000214	61.04999924	-68.22000122	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Marcellin A. Desgagnes	1-Nov-23	16:40	16:45	00:05	61.04000092	-68.19999695	61.02999878	-68.16999817	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	



APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Marcellin A. Desgagnes	1-Nov-23	16:50	16:55	00:05	61	-68.13999939	61	-68.11000061	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	4-Jul-23	09:20	09:25	00:05	61.31666565	-60.31666565	61.34999847	-60.33333206	Moving	1.8	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	09:25	09:30	00:05	61.34999847	-60.33333206	61.36666489	-60.34999847	Moving	1.8	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	09:30	09:35	00:05	61.36666489	-60.34999847	61.38333511	-60.36666489	Moving	1.8	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	09:35	09:40	00:05	61.38333511	-61.36666489	61.40000153	-61.38333511	Moving	1.8	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	09:40	09:45	00:05	61.40000153	-61.38333511	61.41666794	-61.40000153	Moving	1.8	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	09:50	09:55	00:05	61.41666794	-60.40000153	61.43333435	-60.41666794	Moving	1.8	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	10:00	10:05	00:05	61.45000076	-60.43333435	61.46666718	-60.45000076	Moving	1	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	10:05	10:10	00:05	61.46666718	-60.45000076	61.48333359	-60.46666718	Moving	1	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	10:10	10:15	00:05	61.48333359	-60.46666718	61.5	-60.48333359	Moving	1	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	10:15	10:20	00:05	61.5	-60.48333359	61.51666641	-60.5	Moving	1	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	10:20	10:25	00:05	61.51666641	-60.5	61.51666641	-60.51666641	Moving	1	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	4-Jul-23	10:25	10:30	00:05	61.51666641	-60.51666641	61.53333282	-60.51666641	Moving	1	Fog	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	5-Jul-23	08:21	08:26	00:05	62.11666489	-64.94499969	62.11666489	-64.94499969	Stationary	3	Cloudy	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	08:32	08:37	00:05	62.12666702	-64.95966339	62.12333298	-64.96333313	Stationary	3	Cloudy	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	08:38	08:44	00:06	62.12333298	-64.96333313	62.125	-64.97333527	Stationary	3	Cloudy	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	08:47	08:55	00:08	62.125	-68.97333527	62.12833405	-64.98332977	Stationary	3	Cloudy	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	08:56	09:04	00:08	62.12833405	-64.98332977	62.13000107	-64.98999786	Stationary	3	Cloudy	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:05	09:10	00:05	62.11800003	-64.98999786	62.13166809	-64.99666595	Stationary	3	Cloudy	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:20	09:25	00:05	62.13333511	-65.00166321	62.13499832	-65.00499725	Stationary	2	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:25	09:30	00:05	62.13499832	-65.00166321	62.13600159	-65.00666809	Stationary	2	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:30	09:35	00:05	62.13600159	-65.00666809	62.13716507	-65.0083313	Stationary	2	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:35	09:40	00:05	62.13716507	-65.0083313	62.13833237	-65.01000214	Stationary	2	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:40	09:46	00:06	62.13833237	-65.01000214	62.13966751	-65.01200104	Stationary	2	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	5-Jul-23	09:48	09:53	00:05	62.13966751	-65.01200104	62.13999939	-65.01333618	Stationary	2	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	6-Jul-23	08:00	08:05	00:05	61.76666641	-66.19999695	61.76666641	-66.23332977	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:05	08:10	00:05	61.76666641	-66.23332977	61.76666641	-66.23332977	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:10	08:15	00:05	61.76666641	-66.23332977	61.76666641	-66.25	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:15	08:20	00:05	61.76666641	-66.25	61.76666641	-66.26667023	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:20	08:25	00:05	61.76666641	-66.26667023	61.78333282	-66.28333282	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:25	08:30	00:05	61.78333282	-66.28333282	61.78333282	-66.30000305	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:35	08:40	00:05	61.78333282	-66.31666565	61.78333282	-66	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:40	08:45	00:05	61.78333282	-66.33333588	61.78333282	-66.34999847	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:45	08:50	00:05	61.78333282	-66.34999847	61.78333282	-66.3666687	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:50	08:55	00:05	61.78333282	-66.34999847	61.78333282	-66.40000153	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	08:55	09:00	00:05	61.78333282	-66.40000153	61.79999924	-66.43333435	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	6-Jul-23	09:00	09:05	00:05	61.79999924	-66.43333435	61.79999924	-66.46666718	Moving	6	Cloudy	Slight/ Grey	Slight	2	Light Wind
	Nordika Desgagnes	7-Jul-23	08:11	08:16	00:05	62.63999939	-71.46499634	62.55833435	-71.33000183	Moving	100	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	08:18	08:23	00:05	62.55666733	-71.33166504	62.5633316	-71.37666321	Moving	100	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	08:24	08:30	00:06	62.56499863	-71.37750244	62.57166672	-71.41500092	Moving	100	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	08:31	08:36	00:05	62.57166672	-71.41666412	62.58166504	-71.45333099	Moving	100	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	08:37	08:42	00:05	62.58166504	-71.45333099	62.93166733	-71.48500061	Moving	100	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	08:43	08:48	00:05	62.59000015	-71.48500061	62.59999847	-71.52666473	Moving	100	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	08:56	09:01	00:05	62.61166763	-71.625	62.61833191	-71.60333252	Moving	-	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	09:02	09:07	00:05	62.61999893	-71.60666656	62.63000107	-71.62999725	Moving	-	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	09:08	09:13	00:05	62.63000107	-71.62999725	62.63833237	-71.68000031	Moving	-	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	09:13	09:18	00:05	62.63833237	-71.68000031	62.6483345	-71.71833038	Moving	-	Clear or Partly Cloudy	None	Glassy	0	-
	Nordika Desgagnes	7-Jul-23	09:19	09:29	00:10	62.6483345	-71.71833038	62.6566658	-71.75166321	Moving	-	Clear or Partly Cloudy	None	Glassy	0	-
Nordika Desgagnes	7-Jul-23	09:25	09:30	00:05	62.6566658	-71.75166321	62.66666794	-71.79000092	Moving	-	Clear or Partly Cloudy	None	Glassy	0	-	
Nordika Desgagnes	8-Jul-23	08:00	08:05	00:05	62.40000153	-75.31666565	62.38333511	-75.33333588	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
Nordika Desgagnes	8-Jul-23	08:05	08:10	00:05	62.38333511	-75.33333588	62.38333511	-75.34999847	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
Nordika Desgagnes	8-Jul-23	08:10	08:15	00:05	62.38333511	-75.34999847	62.36666489	-75.3666687	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
Nordika Desgagnes	8-Jul-23	08:15	08:20	00:05	62.36666489	-75.3666687	62.36666489	-75.3833313	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
Nordika Desgagnes	8-Jul-23	08:20	08:25	00:05	62.36666489	-75.3833313	62.36666489	-75.40000153	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Nordika Desgagnes	8-Jul-23	08:25	08:30	00:05	62.36666489	-75.40000153	62.36666489	-75.41666412	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	8-Jul-23	08:35	08:40	00:05	62.38333511	-75.43333435	62.40000153	-75.44999695	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	8-Jul-23	08:40	08:45	00:05	62.40000153	-75.44999695	62.41666794	-75.46666718	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	8-Jul-23	08:45	08:50	00:05	62.41666794	-75.46666718	62.41666794	-75.46666718	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	8-Jul-23	08:50	08:55	00:05	62.83333206	-75.46666718	62.43333435	-75.48332977	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	8-Jul-23	08:55	09:00	00:05	62.43333435	-75.48332977	62.45000076	-75.48332977	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	8-Jul-23	09:00	09:05	00:05	62.45000076	-75.48332977	62.45000076	-75.5	Moving	22	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Nordika Desgagnes	9-Jul-23	08:08	08:13	00:05	60.61166763	-81.78833008	60.65000153	-82.03333282	Moving	100	Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Jul-23	08:17	08:23	00:06	60.59000015	-81.83166504	60.57666779	-81.86166382	Moving	100	Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Jul-23	08:24	08:29	00:05	60.57666779	-81.86166382	60.56166684	-81.89333344	Moving	100	Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Jul-23	08:30	08:35	00:05	60.56166684	-81.86333466	60.54166794	-81.93666684	Moving	100	Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Jul-23	08:40	08:45	00:05	60.53499985	-81.95333099	60.52333345	-81.97833252	Moving	100	Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Jul-23	08:46	08:54	00:08	60.52333345	-81.97833252	60.5	-82.03166962	Moving	100	Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Jul-23	09:00	09:05	00:05	60.5	-82.05666351	60.5	-82.10500336	Moving	-	Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	9-Jul-23	09:06	09:14	00:08	60.5	-82.10666656	60.50166702	-82.17500305	Moving	-	Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	9-Jul-23	09:15	09:20	00:05	60.50166702	-82.1783371	60.50166702	-82.21333313	Moving	-	Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	9-Jul-23	09:21	09:28	00:07	60.50166702	-82.21499634	60.50333405	-82.27833557	Moving	-	Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	9-Jul-23	09:29	09:34	00:05	60.50333405	-82.27999878	60.50333405	-82.31833649	Moving	-	Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	9-Jul-23	09:35	09:43	00:08	60.50333405	-82.32499695	60.50333405	-82.38166809	Moving	-	Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	10-Jul-23	08:00	08:05	00:05	62.5	-89.96666718	62.5	-90	Moving	-	Clear or Partly Cloudy	Slight/ Grey	Wavelets	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:05	08:10	00:05	62.5	-90	62.5	-90.03333282	Moving	-	Clear or Partly Cloudy	Slight/ Grey	Wavelets	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:10	08:15	00:05	62.5	-90.03333282	62.51666641	-90.06666565	Moving	-	Clear or Partly Cloudy	Slight/ Grey	Wavelets	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:15	08:20	00:05	62.51666641	-90.06666565	62.51666641	-90.09999847	Moving	-	Clear or Partly Cloudy	Slight/ Grey	Wavelets	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:20	08:25	00:05	62.51666641	-90.09999847	62.51666641	-90.15000153	Moving	-	Clear or Partly Cloudy	Slight/ Grey	Wavelets	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:25	08:30	00:05	62.51666641	-90.15000153	62.53333282	-90.18333435	Moving	-	Clear or Partly Cloudy	Slight/ Grey	Wavelets	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:35	08:40	00:05	62.53333282	-90.21666718	62.53333282	-90.26667023	Moving	100	Clear or Partly Cloudy	Slight/ Grey	Moderate	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:40	08:45	00:05	62.53333282	-90.26667023	62.53333282	-90.31666565	Moving	100	Clear or Partly Cloudy	Slight/ Grey	Moderate	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:45	08:50	00:05	62.53333282	-90.31666565	62.54999924	-90.34999847	Moving	100	Clear or Partly Cloudy	Slight/ Grey	Moderate	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:50	08:55	00:05	62.54999924	-90.34999847	62.54999924	-90.3833313	Moving	100	Clear or Partly Cloudy	Slight/ Grey	Moderate	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	08:55	09:00	00:05	62.54999924	-90.3833313	62.54999924	-90.41666412	Moving	100	Clear or Partly Cloudy	Slight/ Grey	Moderate	3	Strong Wind
	Nordika Desgagnes	10-Jul-23	09:00	09:05	00:05	62.54999924	-90.41666412	62.54999924	-90.44999695	Moving	100	Clear or Partly Cloudy	Slight/ Grey	Moderate	3	Strong Wind
	Nordika Desgagnes	19-Jul-23	08:06	08:11	00:05	61.93650055	-82.45500183	61.93999863	-82.42500305	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	08:12	08:20	00:08	61.93999863	-82.42500305	61.96500015	-82.45333099	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	08:21	08:26	00:05	61.96500015	-82.35166931	61.9766655	-82.23666382	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	08:27	08:32	00:05	61.97499847	-82.31666565	61.99333191	-82.27666473	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	08:36	08:42	00:06	61.95833206	-82.27333069	61.02000046	-82.22499847	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	08:43	08:48	00:05	61.01666641	-82.22333527	61.03833389	-82.19499969	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	09:15	09:21	00:06	62.12333298	-82.05000305	62.14500046	-82	Moving	100	Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	09:23	09:28	00:05	62.14500046	-81.99666595	62.16833496	-81.97666931	Moving	100	Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	09:30	09:36	00:06	62.16833496	-81.97499847	62.19166565	-81.93499756	Moving	100	Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	09:36	09:41	00:05	62.19166565	-81.93499756	62.20999908	-81.90499878	Moving	100	Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	09:42	09:47	00:05	62.20999908	-81.90499878	62.2266655	-81.87666321	Moving	100	Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	19-Jul-23	09:48	09:53	00:05	62.22833252	-81.875	62.24499893	-81.84500122	Moving	100	Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	20-Jul-23	08:00	08:05	00:05	62.16666794	-71.51667023	62.15000153	-71.48332977	Moving	100	Cloudy	Slight/ Grey	Glassy	0	-
	Nordika Desgagnes	20-Jul-23	08:05	08:10	00:05	62.15000153	-71.48332977	62.15000153	-71.34999847	Moving	100	Cloudy	Slight/ Grey	Glassy	0	-
Nordika Desgagnes	20-Jul-23	08:10	08:15	00:05	62.15000153	-71.34999847	62.13333511	-71.41666412	Moving	100	Cloudy	Slight/ Grey	Glassy	0	-	
Nordika Desgagnes	20-Jul-23	08:15	08:20	00:05	62.13333511	-71.41666412	62.13333511	-71.3666687	Moving	100	Cloudy	Slight/ Grey	Glassy	0	-	
Nordika Desgagnes	20-Jul-23	08:20	08:25	00:05	62.13333511	-71.3666687	62.11666489	-71.33333588	Moving	100	Cloudy	Slight/ Grey	Glassy	0	-	
Nordika Desgagnes	20-Jul-23	08:25	08:30	00:05	62.11666489	-71.33333588	62.11666489	-71.30000305	Moving	100	Cloudy	Slight/ Grey	Glassy	0	-	
Nordika Desgagnes	20-Jul-23	08:35	08:40	00:05	62.09999847	-71.26667023	62.08333206	-71.21666718	Moving	100	Cloudy	Slight/ Grey	Glassy	0	Calm	
Nordika Desgagnes	20-Jul-23	08:40	08:45	00:05	62.08333206	-71.21666718	62.08333206	-71.18333435	Moving	100	Cloudy	Slight/ Grey	Glassy	0	Calm	
Nordika Desgagnes	20-Jul-23	08:45	08:50	00:05	62.08333206	-71.18333435	62.06666565	-71.15000153	Moving	100	Cloudy	Slight/ Grey	Glassy	0	Calm	
Nordika Desgagnes	20-Jul-23	08:50	08:55	00:05	62.06666565	-71.15000153	62.06666565	-71.1166687	Moving	100	Cloudy	Slight/ Grey	Glassy	0	Calm	
Nordika Desgagnes	20-Jul-23	08:55	09:00	00:05	62.06666565	-71.1166687	62.04999924	-71.08333588	Moving	100	Cloudy	Slight/ Grey	Glassy	0	Calm	
Nordika Desgagnes	20-Jul-23	09:00	09:05	00:05	62.04999924	-71.08333588	62.04999924	-71.03333282	Moving	100	Cloudy	Slight/ Grey	Glassy	0	Calm	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd.	Kivalliq W.	5-Oct-23	10:00	10:05	00:05	63.97166824	-93.4916687	63.96333313	-93.71333313	Moving	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	-
	Kivalliq W.	5-Oct-23	10:05	10:10	00:05	63.96166611	-93.73000336	63.93833316	-93.83999634	Moving	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	-
	Kivalliq W.	5-Oct-23	10:10	10:15	00:05	63.93833316	-93.90666962	63.91833496	-93.96666718	Moving	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	-
	Kivalliq W.	5-Oct-23	10:15	10:20	00:05	63.93166733	-93.96666718	63.94666672	-94.03500366	Moving	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	-
	Kivalliq W.	5-Oct-23	10:20	10:25	00:05	63.94666672	-94.03500366	63.96500015	-94.00166321	Moving	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	-
	Kivalliq W.	5-Oct-23	10:25	10:30	00:05	63.96500015	-94.06833649	63.98666763	-94.12999725	Moving	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	-
	Kivalliq W.	6-Oct-23	12:00	12:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	6-Oct-23	12:06	12:11	00:05	64.28333282	-95.94999695	64.94999695	-95.94999695	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	6-Oct-23	12:12	12:17	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	6-Oct-23	12:18	12:23	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	6-Oct-23	12:24	12:29	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	6-Oct-23	12:30	12:35	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	7-Oct-23	14:00	14:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kivalliq W.	7-Oct-23	14:05	14:10	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kivalliq W.	7-Oct-23	14:10	14:15	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kivalliq W.	7-Oct-23	14:15	14:20	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kivalliq W.	7-Oct-23	14:20	14:25	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kivalliq W.	7-Oct-23	14:25	14:30	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kivalliq W.	8-Oct-23	12:00	12:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	-	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	8-Oct-23	12:06	12:11	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	-	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	8-Oct-23	12:12	12:17	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	-	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	8-Oct-23	12:18	12:23	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	-	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	8-Oct-23	12:24	12:29	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	-	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	8-Oct-23	12:30	12:35	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	-	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	9-Oct-23	15:00	15:05	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	3	Fog	-	Glassy	0	Light Wind
	Kivalliq W.	9-Oct-23	15:05	15:10	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	3	Fog	-	Glassy	0	Light Wind
	Kivalliq W.	9-Oct-23	15:10	15:15	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	3	Fog	-	Glassy	0	Light Wind
	Kivalliq W.	9-Oct-23	15:18	15:20	00:02	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	3	Fog	-	Glassy	0	Light Wind
	Kivalliq W.	9-Oct-23	15:20	15:25	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	3	Fog	-	Glassy	0	Light Wind
	Kivalliq W.	9-Oct-23	15:25	15:30	00:05	64.1166687	-94.3666687	64.08333588	-94.3666687	Stationary	3	Fog	-	Glassy	0	Light Wind
	Kivalliq W.	10-Oct-23	12:00	12:05	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	1	Fog	-	Wavelets	0.3	Light Wind
	Kivalliq W.	10-Oct-23	12:06	12:11	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	1	Fog	-	Wavelets	0.3	Light Wind
	Kivalliq W.	10-Oct-23	12:12	12:17	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	1	Fog	-	Wavelets	0.3	Light Wind
	Kivalliq W.	10-Oct-23	12:18	12:23	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	1	Fog	-	Wavelets	0.3	Light Wind
	Kivalliq W.	10-Oct-23	12:24	12:29	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	1	Fog	-	Wavelets	0.3	Light Wind
	Kivalliq W.	10-Oct-23	12:30	12:35	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	1	Fog	-	Wavelets	0.3	Light Wind
	Kivalliq W.	11-Oct-23	08:00	08:05	00:05	64.28333282	-95.28333282	64.28333282	-95.28333282	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	-
	Kivalliq W.	11-Oct-23	08:05	08:10	00:05	64.28333282	-95.28333282	64.28333282	-95.28333282	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	-
	Kivalliq W.	11-Oct-23	08:10	08:15	00:05	64.28333282	-95.28333282	64.28333282	-95.28333282	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	-
	Kivalliq W.	11-Oct-23	08:15	08:20	00:05	64.28333282	-95.28333282	64.28333282	-95.28333282	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	-
Kivalliq W.	11-Oct-23	08:20	08:25	00:05	64.28333282	-95.28333282	64.28333282	-95.28333282	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	-	
Kivalliq W.	11-Oct-23	08:25	08:30	00:05	64.28333282	-95.28333282	64.28333282	-95.28333282	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	-	
Kivalliq W.	12-Oct-23	12:00	12:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	-	None	Rough	1	Strong Wind	
Kivalliq W.	12-Oct-23	12:06	12:11	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	-	None	Rough	1	Strong Wind	
Kivalliq W.	12-Oct-23	12:12	12:17	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	-	None	Rough	1	Strong Wind	
Kivalliq W.	12-Oct-23	12:18	12:23	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	-	None	Rough	1	Strong Wind	
Kivalliq W.	12-Oct-23	12:24	12:29	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	-	None	Rough	1	Strong Wind	
Kivalliq W.	12-Oct-23	12:30	12:35	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	-	None	Rough	1	Strong Wind	
Kivalliq W.	13-Oct-23	11:00	11:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Fog	None	Glassy	0	Light Wind	
Kivalliq W.	13-Oct-23	11:15	11:20	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Fog	None	Glassy	0	Light Wind	
Kivalliq W.	13-Oct-23	11:20	11:25	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Fog	None	Glassy	0	Light Wind	
Kivalliq W.	13-Oct-23	11:05	11:10	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Fog	None	Glassy	0	Light Wind	
Kivalliq W.	13-Oct-23	11:10	11:15	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Fog	None	Glassy	0	Light Wind	
Kivalliq W.	13-Oct-23	11:25	11:30	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Fog	None	Glassy	0	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	14-Oct-23	12:00	12:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Snow	-	Slight	0.5	Strong Wind
	Kivalliq W.	14-Oct-23	12:06	12:11	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Snow	-	Slight	0.5	Strong Wind
	Kivalliq W.	14-Oct-23	12:12	12:17	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Snow	-	Slight	0.5	Strong Wind
	Kivalliq W.	14-Oct-23	12:18	12:23	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Snow	-	Slight	0.5	Strong Wind
	Kivalliq W.	14-Oct-23	12:24	12:29	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Snow	-	Slight	0.5	Strong Wind
	Kivalliq W.	14-Oct-23	12:30	12:35	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	1	Snow	-	Slight	0.5	Strong Wind
	Kivalliq W.	16-Oct-23	12:00	12:05	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	16-Oct-23	12:06	12:11	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	16-Oct-23	12:12	12:17	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	16-Oct-23	12:18	12:23	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	16-Oct-23	12:24	12:29	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	16-Oct-23	12:30	12:35	00:05	64.1166687	-94.3666687	64.1166687	-94.3666687	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	17-Oct-23	16:00	16:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	6	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kivalliq W.	17-Oct-23	16:05	16:10	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	6	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kivalliq W.	17-Oct-23	16:10	16:15	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	6	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kivalliq W.	17-Oct-23	16:15	16:20	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	6	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kivalliq W.	17-Oct-23	16:20	16:25	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	6	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kivalliq W.	17-Oct-23	16:25	16:30	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	6	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kivalliq W.	19-Oct-23	09:00	09:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	4	Cloudy	-	Rippled	1	Strong Wind
	Kivalliq W.	19-Oct-23	09:05	09:10	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	4	Cloudy	-	Rippled	1	Strong Wind
	Kivalliq W.	19-Oct-23	09:10	09:15	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	4	Cloudy	-	Rippled	1	Strong Wind
	Kivalliq W.	19-Oct-23	09:15	09:20	00:05	64.28333282	-94.94999695	64.28333282	-94.94999695	Stationary	4	Cloudy	-	Rippled	1	Strong Wind
	Kivalliq W.	19-Oct-23	09:20	09:25	00:05	64.28333282	-94.94999695	64.28333282	-94.94999695	Stationary	4	Cloudy	-	Rippled	1	Strong Wind
	Kivalliq W.	19-Oct-23	09:25	09:30	00:05	64.28333282	-94.94999695	64.28333282	-94.94999695	Stationary	4	Cloudy	-	Rippled	1	Strong Wind
	Kivalliq W.	20-Oct-23	12:00	12:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	0.5	Snow	-	Very Rough	1	Gale Force Wind
	Kivalliq W.	20-Oct-23	12:06	12:11	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	0.5	Snow	-	Very Rough	1	Gale Force Wind
	Kivalliq W.	20-Oct-23	12:12	12:17	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	0.5	Snow	-	Very Rough	1	Gale Force Wind
	Kivalliq W.	20-Oct-23	12:18	12:23	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	0.5	Snow	-	Very Rough	1	Gale Force Wind
	Kivalliq W.	20-Oct-23	12:24	12:29	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	0.5	Snow	-	Very Rough	1	Gale Force Wind
	Kivalliq W.	20-Oct-23	12:30	12:35	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	0.5	Snow	-	Very Rough	1	Gale Force Wind
	Kivalliq W.	22-Oct-23	12:00	12:05	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	22-Oct-23	12:06	12:11	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	22-Oct-23	12:12	12:17	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	22-Oct-23	12:18	12:23	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	22-Oct-23	12:24	12:29	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	22-Oct-23	12:30	12:35	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Slight	0.5	Light Wind
	Kivalliq W.	23-Oct-23	13:00	15:05	02:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	Clear or Partly Cloudy	None	-	-	Strong Wind
	Kivalliq W.	23-Oct-23	15:05	15:10	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	Clear or Partly Cloudy	None	-	-	Strong Wind
	Kivalliq W.	23-Oct-23	15:10	15:15	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	Clear or Partly Cloudy	None	-	-	Strong Wind
	Kivalliq W.	23-Oct-23	15:15	15:20	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	Clear or Partly Cloudy	None	-	-	Strong Wind
	Kivalliq W.	23-Oct-23	15:20	15:25	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	Clear or Partly Cloudy	None	-	-	Strong Wind
	Kivalliq W.	23-Oct-23	15:25	15:30	00:05	64.28333282	-95.94999695	64.28333282	-95.94999695	Stationary	5	Clear or Partly Cloudy	None	-	-	Strong Wind
	Tuvaq W.	10-Aug-23	06:55	07:00	00:05	63.97166824	-94	63.97166824	-94.07333374	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	10-Aug-23	07:05	07:10	00:05	63.95999908	-94.06500244	63.94833374	-94.03666687	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	10-Aug-23	07:11	07:16	00:05	63.94499969	-94.02999878	63.93500137	-94.01000214	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
Tuvaq W.	10-Aug-23	07:17	07:22	00:05	63.92499924	-93.88500214	63.91999817	-93.95666504	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind	
Tuvaq W.	10-Aug-23	07:27	07:28	00:01	63.91999817	-93.95500183	63.92666626	-93.91666412	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind	
Tuvaq W.	10-Aug-23	07:30	07:35	00:05	63.92666626	-93.91000366	63.93333435	-93.86833191	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind	
Tuvaq W.	11-Aug-23	16:29	16:34	00:05	64.21833038	-95.40166473	64.21499634	-95.3666687	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Tuvaq W.	11-Aug-23	17:07	17:12	00:05	64.19000244	-95.16333008	64.1866684	-95.12999725	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Tuvaq W.	11-Aug-23	17:13	17:18	00:05	64.18499756	-95.12166595	64.18166351	-95.09333038	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Tuvaq W.	11-Aug-23	17:23	17:28	00:05	64.1783371	-95.0616684	64.17500305	-95.02999878	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Tuvaq W.	11-Aug-23	17:33	17:38	00:05	64.17166901	-95	64.16666412	-94.96833038	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Tuvaq W.	11-Aug-23	17:45	17:50	00:05	64.16166687	-94.92500305	64.15833282	-94.89333344	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd. (cont'd)	Tuvaq W.	13-Aug-23	09:45	09:50	00:05	63.99166489	-94.28333282	63.99333191	-94.26833344	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	13-Aug-23	09:51	09:56	00:05	63.99333191	-94.26499939	63.99499893	-94.23166656	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	13-Aug-23	09:57	10:02	00:05	63.99499893	-94.22666931	63.99499893	-94.19000244	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	13-Aug-23	10:04	10:09	00:05	63.99333191	-94.1866684	63.99000168	-94.15499878	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	13-Aug-23	10:10	10:15	00:05	63.99000168	-94.15000153	63.98666763	-94.11499786	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	13-Aug-23	10:14	10:22	00:08	63.98166656	-94.10166931	63.97333145	-94.07333374	Moving	10	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	15-Aug-23	11:10	11:15	00:05	63.99499893	-94.23000336	63.99499893	-94.26166534	Moving	10	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Tuvaq W.	15-Aug-23	11:15	11:20	00:05	63.99333191	-94.26499939	63.99333191	-94.26833344	Moving	10	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Tuvaq W.	15-Aug-23	11:20	11:25	00:05	63.99333191	-94.26833344	63.99166489	-94.27999878	Moving	10	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Tuvaq W.	15-Aug-23	11:25	11:30	00:05	63.99166489	-94.28166962	63.99333191	-94.30166626	Moving	10	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Tuvaq W.	15-Aug-23	11:30	11:35	00:05	63.99333191	-94.30166626	63.99333191	-94.3133316	Moving	10	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Tuvaq W.	15-Aug-23	11:35	11:40	00:05	63.99666595	-94.3133316	64	-94.3216629	Moving	10	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Tuvaq W.	16-Aug-23	11:30	11:35	00:05	63.98799896	-94.04066467	63.99016571	-94.14566803	Moving	10	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Tuvaq W.	16-Aug-23	11:38	11:44	00:06	63.90750122	-94.15350342	63.99266815	-94.16999817	Moving	10	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Tuvaq W.	16-Aug-23	11:45	11:50	00:05	63.99333191	-94.18266296	63.99599838	-94.20183563	Moving	10	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Tuvaq W.	16-Aug-23	11:51	11:56	00:05	63.99599838	-94.20749664	63.98699951	-94.23033142	Moving	10	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Tuvaq W.	16-Aug-23	11:58	12:03	00:05	63.99516678	-94.22483063	63.99449921	-94.25550079	Moving	10	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Tuvaq W.	16-Aug-23	12:04	12:09	00:05	63.99433517	-94.25900269	63.99250031	-94.27383423	Moving	10	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Tuvaq W.	17-Aug-23	11:20	11:25	00:05	63.92216492	-94.9426651	63.92100143	-94.97299957	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	17-Aug-23	11:26	11:31	00:05	63.92233276	-93.97699738	63.93199921	-94.00499725	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	17-Aug-23	11:31	11:36	00:05	63.9331665	-94.00700378	63.9438324	-94.03083038	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	17-Aug-23	11:38	11:43	00:05	63.94566727	-94.03366852	63.95449829	-94.05783081	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	17-Aug-23	11:43	11:48	00:05	63.95583344	-94.05966949	63.96633148	-94.0684967	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Tuvaq W.	17-Aug-23	11:49	11:57	00:08	63.96866608	-94.06933594	63.97933197	-94.09049988	Moving	10	Cloudy	None	Rippled	0	Light Wind
Nordika	Nordika Desgagnes	7-Aug-23	08:00	08:05	00:05	62.50333405	-73.33666992	62.50833511	-73.35500336	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Calm
	Nordika Desgagnes	7-Aug-23	08:05	08:10	00:05	62.50833511	-73.35500336	62.50966644	-73.38500214	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Calm
	Nordika Desgagnes	7-Aug-23	08:10	08:15	00:05	62.50966644	-73.38500214	62.50966644	-73.41833496	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Calm
	Nordika Desgagnes	7-Aug-23	08:15	08:20	00:05	62.50966644	-73.41833496	62.50833511	-73.45500183	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Calm
	Nordika Desgagnes	7-Aug-23	08:20	08:25	00:05	62.50833511	-73.45500183	62.50966644	-73.48500061	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Calm
	Nordika Desgagnes	7-Aug-23	08:25	08:30	00:05	62.50966644	-73.48500061	62.50999832	-73.51166534	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Calm
	Nordika Desgagnes	7-Aug-23	08:35	08:40	00:05	62.50666809	-73.53666687	62.50999832	-73.5716629	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Light Wind
	Nordika Desgagnes	7-Aug-23	08:40	08:45	00:05	62.50999832	-73.61000061	62.51166534	-73.61000061	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Light Wind
	Nordika Desgagnes	7-Aug-23	08:45	08:50	00:05	62.51166534	-73.61000061	62.51300049	-73.64833069	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Light Wind
	Nordika Desgagnes	7-Aug-23	08:50	08:55	00:05	62.51166534	-73.64833069	62.51333237	-73.66983032	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Light Wind
	Nordika Desgagnes	7-Aug-23	08:55	09:00	00:05	62.51333237	-73.66983032	62.51499939	-73.70549774	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Light Wind
	Nordika Desgagnes	7-Aug-23	09:00	09:05	00:05	62.51499939	-73.70549774	62.51499939	-73.74333191	Moving	0.5	Fog	Slight/ Grey	Glassy	1	Light Wind
	Nordika Desgagnes	8-Aug-23	08:05	08:10	00:05	61.91666794	-83.88150024	61.91666794	-83.92166901	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	-
	Nordika Desgagnes	8-Aug-23	08:10	08:15	00:05	61.91666794	-83.92166901	61.91500092	-83.95666504	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	-
	Nordika Desgagnes	8-Aug-23	08:15	08:20	00:05	61.91500092	-83.95666504	61.91500092	-84.00333405	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	-
	Nordika Desgagnes	8-Aug-23	08:20	08:25	00:05	61.91500092	-84.00333405	61.91833496	-84.34999847	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	-
	Nordika Desgagnes	8-Aug-23	08:25	08:30	00:05	61.91833496	-84.34999847	61.92283249	-84.07666779	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	-
	Nordika Desgagnes	8-Aug-23	08:30	08:35	00:05	61.92283249	-84.07666779	61.92666626	-84.11333466	Moving	-	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	-
	Nordika Desgagnes	8-Aug-23	08:40	08:45	00:05	61.93099976	-84.15299988	61.93583298	-84.19499969	Moving	100	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Light Wind
	Nordika Desgagnes	8-Aug-23	08:45	08:50	00:05	61.93583298	-84.19499969	61.93933487	-84.22616577	Moving	100	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Light Wind
	Nordika Desgagnes	8-Aug-23	08:50	08:55	00:05	61.93933487	-84.22616577	61.94333267	-84.27183533	Moving	100	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Light Wind
	Nordika Desgagnes	8-Aug-23	08:55	09:00	00:05	61.94333267	-84.27183533	61.94883347	-84.31800079	Moving	100	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Light Wind
	Nordika Desgagnes	8-Aug-23	09:05	09:05	00:00	61.94883374	-84.31800079	61.95166779	-84.34666443	Moving	100	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Light Wind
	Nordika Desgagnes	8-Aug-23	09:05	09:10	00:05	61.95166779	-84.34666443	61.95500183	-84.38566589	Moving	100	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Light Wind
	Nordika Desgagnes	9-Aug-23	08:00	08:05	00:05	62.77666855	-92.09666443	62.77666855	-92.09666443	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.1	Calm
	Nordika Desgagnes	9-Aug-23	08:05	08:10	00:05	62.77666855	-92.09666443	62.77666855	-92.09666443	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.1	Calm
	Nordika Desgagnes	9-Aug-23	08:10	08:15	00:05	62.77666855	-92.09666443	62.77666855	-92.09666443	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.1	Calm
	Nordika Desgagnes	9-Aug-23	08:15	08:20	00:05	62.77666855	-92.09666443	62.77666855	-92.09666443	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.1	Calm
Nordika Desgagnes	9-Aug-23	08:20	08:25	00:05	62.77666855	-92.09666443	62.77666855	-92.09666443	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.1	Calm	
Nordika Desgagnes	9-Aug-23	08:30	08:35	00:05	62.77666855	-92.09666443	62.77666855	-92.09666443	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.1	Calm	



APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Nordika Desgagnes	20-Aug-23	08:00	08:05	00:05	62.77500153	-92.09999847	62.77500153	-92.09999847	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	20-Aug-23	08:05	08:10	00:05	62.77500153	-92.09999847	62.77500153	-92.09999847	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	20-Aug-23	08:10	08:15	00:05	62.77500153	-92.09999847	62.77500153	-92.09999847	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	20-Aug-23	08:15	08:20	00:05	62.77500153	-92.09999847	62.77500153	-92.09999847	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	20-Aug-23	08:20	08:25	00:05	62.77500153	-92.09999847	62.77500153	-92.09999847	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	20-Aug-23	08:25	08:30	00:05	62.77500153	-92.09999847	62.77500153	-92.09999847	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	21-Aug-23	08:00	08:05	00:05	62.77333345	-92.09500122	62.77333345	-92.11166382	Stationary	7	Clear or Partly Cloudy	None	Glassy	0	Calm
	Nordika Desgagnes	21-Aug-23	08:05	08:10	00:05	62.77333345	-92.11166382	62.77333345	-92.11166382	Stationary	7	Clear or Partly Cloudy	None	Glassy	0	Calm
	Nordika Desgagnes	21-Aug-23	08:10	08:15	00:05	62.77333345	-92.11166382	62.77333345	-92.11166382	Stationary	7	Clear or Partly Cloudy	None	Glassy	0	Calm
	Nordika Desgagnes	21-Aug-23	08:15	08:20	00:05	62.77333345	-92.11166382	62.77333345	-92.11166382	Stationary	7	Clear or Partly Cloudy	None	Glassy	0	Calm
	Nordika Desgagnes	21-Aug-23	08:20	08:25	00:05	62.77333345	-92.11166382	62.77333345	-92.11166382	Stationary	7	Clear or Partly Cloudy	None	Glassy	0	Calm
	Nordika Desgagnes	21-Aug-23	08:25	08:30	00:05	62.77333345	-92.11166382	62.77333345	-92.11166382	Stationary	7	Clear or Partly Cloudy	None	Glassy	0	Calm
	Nordika Desgagnes	22-Aug-23	08:00	08:05	00:05	62.75666809	-92.09500122	62.75666809	-92.09500122	Stationary	5	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Aug-23	08:05	08:10	00:05	62.75666809	-92.09500122	62.75666809	-92.09500122	Stationary	5	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Aug-23	08:10	08:15	00:05	62.75666809	-92.09500122	62.75666809	-92.09500122	Stationary	5	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Aug-23	08:15	08:20	00:05	62.75666809	-92.09500122	62.75666809	-92.09500122	Stationary	5	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Aug-23	08:20	08:25	00:05	62.75666809	-92.09500122	62.75666809	-92.09500122	Stationary	5	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Aug-23	08:25	08:30	00:05	62.75666809	-92.09500122	62.75666809	-92.09500122	Stationary	5	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Aug-23	08:31	08:36	00:05	61.98500061	-84.6866684	61.97999954	-84.64333344	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Aug-23	08:37	08:42	00:05	61.97833252	-84.64333344	61.9766655	-84.59666443	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Aug-23	08:42	08:48	00:06	61.9766655	-84.59666443	61.97166824	-84.58499908	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Aug-23	08:49	08:54	00:05	61.97166824	-84.55166626	61.96666718	-84.50166321	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Aug-23	08:55	09:00	00:05	61.96500015	-84.5	61.96166611	-84.45999908	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Aug-23	09:01	09:06	00:05	61.96166611	-84.45999908	61.95666504	-84.48833466	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	24-Aug-23	08:00	08:05	00:05	62.51499939	-73.63500214	62.51499939	-73.58499908	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	24-Aug-23	08:07	08:13	00:06	62.51499939	-73.58166504	62.51499939	-73.51333618	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	24-Aug-23	08:14	08:20	00:06	62.51499939	-73.51166534	62.51499939	-73.45666504	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	24-Aug-23	08:21	08:26	00:05	62.51499939	-73.44166565	62.51499939	-73.39167023	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	24-Aug-23	08:27	08:32	00:05	62.51499939	-73.38833618	62.51499939	-73.33833313	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	24-Aug-23	08:34	08:39	00:05	62.51499939	-73.33666992	62.51499939	-73.28333282	Moving	7	Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	25-Aug-23	08:15	08:23	00:08	60.11000061	-63.72499847	60.67833328	-63.67333221	Moving	7	Clear or Partly Cloudy	Slight/ Grey	Moderate	1.5	Strong Wind
	Nordika Desgagnes	25-Aug-23	08:24	08:30	00:06	60.07666779	-63.67333221	60.05500031	-63.63999939	Moving	7	Clear or Partly Cloudy	Slight/ Grey	Moderate	1.5	Strong Wind
	Nordika Desgagnes	25-Aug-23	08:31	08:36	00:05	60.05500031	-63.64666748	60.03666687	-63.61833191	Moving	7	Clear or Partly Cloudy	Slight/ Grey	Moderate	1.5	Strong Wind
	Nordika Desgagnes	25-Aug-23	08:37	08:42	00:05	60.03666687	-63.61833191	60.02000046	-63.59666824	Moving	7	Clear or Partly Cloudy	Slight/ Grey	Moderate	1.5	Strong Wind
	Nordika Desgagnes	11-Sep-23	08:05	08:10	00:05	60.22833252	-63.14666748	60.23600006	-63.18500137	Moving	100	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:10	08:15	00:05	60.23600006	-63.18500137	60.24000168	-63.20666504	Moving	100	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:15	08:20	00:05	60.24000168	-63.20666504	60.24499893	-63.23833466	Moving	100	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:20	08:25	00:05	60.24499893	-63.23833466	60.25333405	-63.27500153	Moving	100	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:25	08:30	00:05	60.25333405	-63.27500153	60.25833511	-63.30333328	Moving	100	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:30	08:35	00:05	60.25833511	-63.30333328	60.26499939	-63.33333206	Moving	100	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:45	08:50	00:05	60.27666855	-63.39333344	60.2816658	-63.42166519	Moving	100	Clear or Partly Cloudy	None	Slight	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:50	08:55	00:05	60.2816658	-63.42166519	60.28833389	-63.45166779	Moving	100	Clear or Partly Cloudy	None	Slight	2	Light Wind
	Nordika Desgagnes	11-Sep-23	08:55	09:00	00:05	60.28833389	-63.45166779	60.29333496	-63.4766655	Moving	100	Clear or Partly Cloudy	None	Slight	2	Light Wind
	Nordika Desgagnes	11-Sep-23	09:00	09:05	00:05	60.29333496	-63.47433472	60.30066681	-63.8433342	Moving	100	Clear or Partly Cloudy	None	Slight	2	Light Wind
	Nordika Desgagnes	11-Sep-23	09:05	09:10	00:05	60.30066681	-63.50999832	60.30500031	-63.52999878	Moving	100	Clear or Partly Cloudy	None	Slight	2	Light Wind
	Nordika Desgagnes	11-Sep-23	09:10	09:15	00:05	60.30500031	-63.52999878	60.31000137	-63.5616684	Moving	100	Clear or Partly Cloudy	None	Slight	2	Light Wind
	Nordika Desgagnes	12-Sep-23	08:00	08:05	00:05	62.35833359	-72.32666779	62.36999893	-72.37433624	Moving	20	-	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	12-Sep-23	08:05	08:10	00:05	62.36999893	-72.37433624	62.375	-72.39666748	Moving	20	-	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	12-Sep-23	08:10	08:15	00:05	62.375	-72.39666748	62.38416672	-72.43499756	Moving	20	-	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	12-Sep-23	08:15	08:20	00:05	62.38416672	-72.43499756	62.39666748	-72.46833038	Moving	20	-	Slight/ Grey	Wavelets	1	Strong Wind
Nordika Desgagnes	12-Sep-23	08:20	08:25	00:05	62.39666748	-72.46833038	62.40000153	-72.50499725	Moving	20	-	Slight/ Grey	Wavelets	1	Strong Wind	
Nordika Desgagnes	12-Sep-23	08:25	08:30	00:05	62.40000153	-72.50499725	62.40950012	-72.54333496	Moving	20	-	Slight/ Grey	Wavelets	1	Strong Wind	
Nordika Desgagnes	12-Sep-23	08:40	08:45	00:05	62.42716599	-72.61933136	62.43500137	-72.66166687	Moving	20	Cloudy	Slight/ Grey	Wavelets	1	Strong Wind	
Nordika Desgagnes	12-Sep-23	08:45	08:50	00:05	62.43500137	-72.66166687	62.44333267	-72.6894989	Moving	20	Cloudy	Slight/ Grey	Wavelets	1	Strong Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Nordika Desgagnes	12-Sep-23	08:50	08:55	00:05	62.44333267	-72.6894989	62.45199966	-72.72750092	Moving	20	Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	12-Sep-23	08:55	09:00	00:05	62.45199966	-72.72750092	62.46016693	-72.76166534	Moving	20	Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	12-Sep-23	09:00	09:05	00:05	62.46016693	-72.76166534	62.46783447	-72.79666901	Moving	20	Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	12-Sep-23	09:05	09:10	00:05	62.46783447	-72.79666901	62.4766655	-72.84033203	Moving	20	Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	13-Sep-23	08:00	08:05	00:05	61.98833466	-82.35666656	61.97499847	-82.38166809	Moving	20	Clear or Partly Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	13-Sep-23	08:05	08:10	00:05	61.97499847	-82.38166809	61.96166611	-82.40666962	Moving	20	Clear or Partly Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	13-Sep-23	08:10	08:15	00:05	61.96166611	-82.40666962	61.95016479	-82.43166351	Moving	20	Clear or Partly Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	13-Sep-23	08:15	08:20	00:05	61.95016479	-82.43166351	61.93500137	-82.46333313	Moving	20	Clear or Partly Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	13-Sep-23	08:20	08:25	00:05	61.93500137	-82.46333313	61.92416763	-82.48483276	Moving	20	Clear or Partly Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	13-Sep-23	08:25	08:30	00:05	61.92416763	-82.48483276	61.91666794	-82.52633667	Moving	20	Clear or Partly Cloudy	None	Wavelets	1	-
	Nordika Desgagnes	13-Sep-23	08:40	08:45	00:05	61.9173317	-82.59333038	61.91666794	-82.62666321	Moving	25	Clear or Partly Cloudy	None	Slight	1	Light Wind
	Nordika Desgagnes	13-Sep-23	08:45	08:50	00:05	61.91666794	-82.62666321	61.91666794	-82.66500092	Moving	25	Clear or Partly Cloudy	None	Slight	1	Light Wind
	Nordika Desgagnes	13-Sep-23	08:50	08:55	00:05	61.91666794	-82.66500092	61.91666794	-82.69999695	Moving	25	Clear or Partly Cloudy	None	Slight	1	Light Wind
	Nordika Desgagnes	13-Sep-23	08:55	09:00	00:05	61.91666794	-82.69999695	61.91666794	-82.73332977	Moving	25	Clear or Partly Cloudy	None	Slight	1	Light Wind
	Nordika Desgagnes	13-Sep-23	09:00	09:05	00:05	61.91666794	-82.73332977	61.91666794	-82.77999878	Moving	25	Clear or Partly Cloudy	None	Slight	1	Light Wind
	Nordika Desgagnes	13-Sep-23	09:05	09:10	00:05	61.91666794	-82.77999878	61.91666794	-82.81500244	Moving	25	Clear or Partly Cloudy	None	Slight	1	Light Wind
	Nordika Desgagnes	14-Sep-23	08:00	08:05	00:05	63.51499939	-91.08499908	63.51499939	-91.08499908	Stationary	7	Clear or Partly Cloudy	None	Wavelets	0.25	Light Wind
	Nordika Desgagnes	14-Sep-23	08:05	08:10	00:05	63.51499939	-91.08499908	63.51499939	-91.08499908	Stationary	7	Clear or Partly Cloudy	None	Wavelets	0.25	Light Wind
	Nordika Desgagnes	14-Sep-23	08:10	08:15	00:05	63.51499939	-91.08499908	63.51499939	-91.08499908	Stationary	7	Clear or Partly Cloudy	None	Wavelets	0.25	Light Wind
	Nordika Desgagnes	14-Sep-23	08:15	08:20	00:05	63.51333237	-81.08499908	63.51499939	-91.08499908	Stationary	7	Clear or Partly Cloudy	None	Wavelets	0.25	Light Wind
	Nordika Desgagnes	14-Sep-23	08:20	08:25	00:05	63.50666809	-91.08499908	63.51499939	-91.08499908	Stationary	7	Clear or Partly Cloudy	None	Wavelets	0.25	Light Wind
	Nordika Desgagnes	14-Sep-23	08:25	08:30	00:05	63.51499939	-91.08499908	63.51499939	-91.08499908	Stationary	7	Clear or Partly Cloudy	None	Wavelets	0.25	Light Wind
	Nordika Desgagnes	15-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	15-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	15-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	15-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	15-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	15-Sep-23	08:30	08:35	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	16-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.5	Light Wind
	Nordika Desgagnes	16-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.5	Light Wind
	Nordika Desgagnes	16-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.5	Light Wind
	Nordika Desgagnes	16-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.5	Light Wind
	Nordika Desgagnes	16-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.5	Light Wind
	Nordika Desgagnes	16-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.5	Light Wind
	Nordika Desgagnes	17-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	0.2	Fog	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	17-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.58999634	Stationary	0.2	Fog	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	17-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	0.2	Fog	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	17-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	0.2	Fog	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	17-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	0.2	Fog	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	17-Sep-23	08:30	08:35	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	0.2	Fog	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	18-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Wavelets	0.75	Light Wind
Nordika Desgagnes	18-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Wavelets	0.75	Light Wind	
Nordika Desgagnes	18-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Wavelets	0.75	Light Wind	
Nordika Desgagnes	18-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Wavelets	0.75	Light Wind	
Nordika Desgagnes	18-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Wavelets	0.75	Light Wind	
Nordika Desgagnes	18-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Wavelets	0.75	Light Wind	
Nordika Desgagnes	19-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Rippled	0.5	Light Wind	
Nordika Desgagnes	19-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Rippled	0.5	Light Wind	
Nordika Desgagnes	19-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Rippled	0.5	Light Wind	
Nordika Desgagnes	19-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Rippled	0.5	Light Wind	
Nordika Desgagnes	19-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Rippled	0.5	Light Wind	
Nordika Desgagnes	19-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Cloudy	None	Rippled	0.5	Light Wind	
Nordika Desgagnes	20-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm	
Nordika Desgagnes	20-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm	



APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Nordika Desgagnes	20-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	20-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	20-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	20-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	21-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	21-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	21-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	21-Sep-23	08:20	08:25	00:05	63.94833374	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	21-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	21-Sep-23	08:30	08:35	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	22-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	22-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Nordika Desgagnes	23-Sep-23	08:00	08:05	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	23-Sep-23	08:05	08:10	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	23-Sep-23	08:10	08:15	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	23-Sep-23	08:15	08:20	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	23-Sep-23	08:20	08:25	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	23-Sep-23	08:25	08:30	00:05	63.93999863	-93.59833527	63.93999863	-93.59833527	Stationary	7	Clear or Partly Cloudy	None	Rippled	0.5	Calm
	Nordika Desgagnes	24-Sep-23	08:25	08:30	00:05	61.91500092	-82.85832977	61.91666794	-82.80666351	Moving	0.1	Fog	None	Slight	1	Light Wind
	Nordika Desgagnes	24-Sep-23	08:30	08:35	00:05	61.91666794	-82.80666351	61.91666794	-82.77333069	Moving	0.1	Fog	None	Slight	1	Light Wind
	Nordika Desgagnes	24-Sep-23	08:35	08:40	00:05	61.91666794	-82.77333069	61.91666794	-82.73332977	Moving	0.1	Fog	None	Slight	1	Light Wind
	Nordika Desgagnes	24-Sep-23	08:40	08:47	00:07	61.91666794	-82.73332977	61.91666794	-82.67666626	Moving	0.1	Fog	None	Slight	1	Light Wind
	Nordika Desgagnes	24-Sep-23	08:47	08:52	00:05	61.91666794	-82.67666626	61.91666794	-82.64167023	Moving	0.1	Fog	None	Slight	1	Light Wind
	Nordika Desgagnes	24-Sep-23	08:52	08:57	00:05	61.91666794	-82.64167023	61.91666794	-82.59999847	Moving	0.1	Fog	None	Slight	1	Light Wind
	Nordika Desgagnes	25-Sep-23	08:08	08:13	00:05	62.15833282	-71.47333527	62.14666748	-71.4366684	Moving	0.1	Fog	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	25-Sep-23	08:13	08:18	00:05	62.14666748	-71.4366684	62.13999939	-71.41166687	Moving	0.1	Fog	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	25-Sep-23	08:18	08:24	00:06	62.13999939	-71.41166687	62.12833405	-71.36333466	Moving	0.1	Fog	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	25-Sep-23	08:24	08:36	00:12	62.12833405	-71.36333466	62.10833359	-71.27500153	Moving	0.1	Fog	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	25-Sep-23	08:36	08:42	00:06	62.10833359	-71.27500153	62.09833145	-71.23000336	Moving	0.1	Fog	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	25-Sep-23	08:42	08:47	00:05	62.09833145	-71.23000336	62.09166718	-71.19833374	Moving	0.1	Fog	None	Wavelets	0.5	Light Wind
	Nordika Desgagnes	11-Oct-23	08:30	08:35	00:05	60.95166779	-66.49500275	60.96166611	-66.5633316	Moving	20	Cloudy	Slight/ Grey	Rough	3	-
	Nordika Desgagnes	11-Oct-23	08:35	08:40	00:05	60.96166611	-66.53500366	60.97000122	-66.5633316	Moving	20	Cloudy	Slight/ Grey	Rough	3	-
	Nordika Desgagnes	11-Oct-23	09:30	09:35	00:05	61.03333282	-66.87999725	61.05666733	-66.92500305	Moving	20	Cloudy	Slight/ Grey	Rough	3	-
	Nordika Desgagnes	11-Oct-23	09:10	09:15	00:05	61.01499939	-66.74333191	61.02666855	-66.79499817	Moving	20	Cloudy	Slight/ Grey	Rough	3	-
	Nordika Desgagnes	11-Oct-23	10:50	10:55	00:05	61.08499908	-67.03166962	61.09999847	-67.09500122	Moving	20	Cloudy	Slight/ Grey	Rough	3	-
	Nordika Desgagnes	11-Oct-23	10:15	10:20	00:05	61.11666489	-67.16833496	61.13166809	-67.22166443	Moving	20	Cloudy	Slight/ Grey	Rough	3	-
	Nordika Desgagnes	12-Oct-23	08:20	08:25	00:05	62.54999924	-76.6333313	62.54999924	-76.65000153	Moving	15	Cloudy	-	Rippled	0	Light Wind
	Nordika Desgagnes	12-Oct-23	08:25	08:30	00:05	62.56666565	-76.69999695	62.56666565	-76.71666718	Moving	15	Cloudy	-	Rippled	0	Light Wind
	Nordika Desgagnes	12-Oct-23	08:35	08:40	00:05	62.56666565	-76.73332977	62.56666565	-76.75	Moving	15	Cloudy	-	Rippled	0	Light Wind
	Nordika Desgagnes	12-Oct-23	08:40	08:45	00:05	62.56666565	-76.75	62.56666565	-76.75	Moving	15	Cloudy	-	Rippled	0	Light Wind
	Nordika Desgagnes	12-Oct-23	08:50	08:55	00:05	62.56666565	-76.76667023	62.56666565	-76.78333282	Moving	15	Cloudy	-	Rippled	0	Light Wind
Nordika Desgagnes	12-Oct-23	09:00	09:05	00:05	62.58333206	-76.96666718	62.58333206	-76.96666718	Moving	15	Cloudy	-	Rippled	0	Light Wind	
Nordika Desgagnes	13-Oct-23	08:45	08:50	00:05	62.20999908	-86.9466629	62.21666718	-87.00166321	Moving	20	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind	
Nordika Desgagnes	13-Oct-23	09:00	09:05	00:05	62.22000122	-87.05000305	62.22499847	-87.09999847	Moving	20	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind	
Nordika Desgagnes	13-Oct-23	09:15	09:20	00:05	62.23333359	-87.15000153	62.23333359	-87.21666718	Moving	20	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind	
Nordika Desgagnes	13-Oct-23	09:30	09:35	00:05	62.25	-87.34999847	62.25	-87.34999847	Moving	20	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind	
Nordika Desgagnes	13-Oct-23	09:50	09:55	00:05	62.25	-87.48332977	62.26666641	-87.48332977	Moving	20	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind	
Nordika Desgagnes	13-Oct-23	10:10	10:15	00:05	62.26666641	-87.55000305	62.26666641	-87.59999847	Moving	20	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind	
Nordika Desgagnes	14-Oct-23	09:42	09:47	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	15	Cloudy	None	Rippled	0.3	Light Wind	
Nordika Desgagnes	14-Oct-23	09:57	10:02	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	15	Cloudy	None	Rippled	0.3	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Nordika Desgagnes	14-Oct-23	10:15	10:20	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	15	Cloudy	None	Rippled	0.3	Light Wind
	Nordika Desgagnes	14-Oct-23	10:30	10:35	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	15	Cloudy	None	Rippled	0.3	Light Wind
	Nordika Desgagnes	14-Oct-23	10:45	10:50	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	15	Cloudy	None	Rippled	0.3	Light Wind
	Nordika Desgagnes	14-Oct-23	11:00	11:05	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	15	Cloudy	None	Rippled	0.3	Light Wind
	Nordika Desgagnes	15-Oct-23	08:05	08:10	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	10	Cloudy	None	Rippled	0.1	Light Wind
	Nordika Desgagnes	15-Oct-23	08:20	08:25	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	10	Cloudy	None	Rippled	0.1	Light Wind
	Nordika Desgagnes	15-Oct-23	08:35	08:40	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	10	Cloudy	None	Rippled	0.1	Light Wind
	Nordika Desgagnes	15-Oct-23	08:50	08:55	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	10	Cloudy	None	Rippled	0.1	Light Wind
	Nordika Desgagnes	15-Oct-23	09:05	09:10	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	10	Cloudy	None	Rippled	0.1	Light Wind
	Nordika Desgagnes	15-Oct-23	09:20	09:25	00:05	62.76666641	-92.08333588	62.76666641	-92.08333588	Stationary	10	Cloudy	None	Rippled	0.1	Light Wind
	Nordika Desgagnes	16-Oct-23	09:00	09:05	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind
	Nordika Desgagnes	16-Oct-23	09:05	09:10	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind
	Nordika Desgagnes	16-Oct-23	09:10	09:15	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind
	Nordika Desgagnes	16-Oct-23	09:15	09:20	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind
	Nordika Desgagnes	16-Oct-23	09:20	09:25	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind
	Nordika Desgagnes	16-Oct-23	09:25	09:30	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Light Wind
	Nordika Desgagnes	17-Oct-23	09:00	09:05	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	15	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	17-Oct-23	09:05	09:10	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	15	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	17-Oct-23	09:10	09:15	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	15	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	17-Oct-23	09:15	09:20	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	15	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	17-Oct-23	09:20	09:25	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	15	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	17-Oct-23	09:25	09:30	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	15	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Nordika Desgagnes	18-Oct-23	09:00	09:05	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	18	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	18-Oct-23	09:05	09:10	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	18	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	18-Oct-23	09:10	09:15	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	18	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	18-Oct-23	09:15	09:20	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	18	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	18-Oct-23	09:20	09:25	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	18	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	18-Oct-23	09:25	09:30	00:05	62.76750183	-92.08333588	62.76750183	-92.08333588	Stationary	18	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Strong Wind
	Nordika Desgagnes	19-Oct-23	09:00	09:05	00:05	62.77333345	-92.08333588	62.77333345	-92.08333588	Stationary	20	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	19-Oct-23	09:05	09:10	00:05	62.77333345	-92.08333588	62.77333345	-92.08333588	Stationary	20	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	19-Oct-23	09:10	09:15	00:05	62.77333345	-92.08333588	62.77333345	-92.08333588	Stationary	20	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	19-Oct-23	09:15	09:20	00:05	62.77333345	-92.08333588	62.77333345	-92.08333588	Stationary	20	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	19-Oct-23	09:20	09:25	00:05	62.77333345	-92.08333588	62.77333345	-92.08333588	Stationary	20	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	19-Oct-23	09:25	09:30	00:05	62.77333345	-92.08333588	62.77333345	-92.08333588	Stationary	20	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Nordika Desgagnes	20-Oct-23	09:00	09:05	00:05	62.77666855	-92.08333588	62.77666855	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Slight	1	Strong Wind
	Nordika Desgagnes	20-Oct-23	09:05	09:10	00:05	62.77666855	-92.08333588	62.77666855	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Slight	1	Strong Wind
	Nordika Desgagnes	20-Oct-23	09:10	09:15	00:05	62.77666855	-92.08333588	62.77666855	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Slight	1	Strong Wind
	Nordika Desgagnes	20-Oct-23	09:15	09:20	00:05	62.77666855	-92.08333588	62.77666855	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Slight	1	Strong Wind
	Nordika Desgagnes	20-Oct-23	09:20	09:25	00:05	62.77666855	-92.08333588	62.77666855	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Slight	1	Strong Wind
	Nordika Desgagnes	20-Oct-23	09:25	09:30	00:05	62.77666855	-92.08333588	62.77666855	-92.08333588	Stationary	20	Clear or Partly Cloudy	Slight/ Grey	Slight	1	Strong Wind
	Nordika Desgagnes	21-Oct-23	09:05	09:10	00:05	62.21666718	-87.03333282	62.20000076	-86.93333435	Moving	20	Cloudy	Slight/ Grey	Slight	1	Strong Wind
Nordika Desgagnes	21-Oct-23	09:15	09:20	00:05	62.20000076	-86.90000153	62.18333435	-86.86666687	Moving	20	Cloudy	Slight/ Grey	Slight	1	Strong Wind	
Nordika Desgagnes	21-Oct-23	09:30	09:35	00:05	62.18333435	-86.78333282	62.18333435	-86.75	Moving	20	Cloudy	Slight/ Grey	Slight	1	Strong Wind	
Nordika Desgagnes	21-Oct-23	09:40	09:45	00:05	62.18333435	-86.69999695	62.18333435	-86.65000153	Moving	20	Cloudy	Slight/ Grey	Slight	1	Strong Wind	
Nordika Desgagnes	21-Oct-23	09:55	10:00	00:05	62.16666794	-86.58333588	62.16666794	-86.55000305	Moving	20	Cloudy	Slight/ Grey	Slight	1	Strong Wind	
Nordika Desgagnes	21-Oct-23	10:10	10:15	00:05	62.15000153	-86.48332977	62.16666794	-86.44999695	Moving	20	Cloudy	Slight/ Grey	Slight	1	Strong Wind	
Nordika Desgagnes	22-Oct-23	09:05	09:10	00:05	62.51499939	-75.79666901	62.51499939	-75.79666901	Moving	15	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Nordika Desgagnes	22-Oct-23	09:20	09:25	00:05	62.51666641	-75.69999695	62.51666641	-75.66666412	Moving	15	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Nordika Desgagnes	22-Oct-23	09:35	09:40	00:05	62.51666641	-75.55000305	62.51666641	-75.51667023	Moving	15	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Nordika Desgagnes	22-Oct-23	09:50	09:55	00:05	62.51666641	-75.40000153	62.51666641	-75.40000153	Moving	15	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Nordika Desgagnes	22-Oct-23	10:05	10:10	00:05	62.51499939	-75.34999847	62.51499939	-75.31666565	Moving	15	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Nordika Desgagnes	22-Oct-23	10:20	10:25	00:05	62.51499939	-75.26667023	62.51499939	-75.23332977	Moving	15	Clear or Partly Cloudy	None	Wavelets	1	Light Wind	
Nordika Desgagnes	23-Oct-23	08:25	08:30	00:05	60.71666718	-65.48332977	60.70000076	-65.44999695	Moving	25	Clear or Partly Cloudy	-	Wavelets	0.3	Light Wind	
Nordika Desgagnes	23-Oct-23	08:35	08:40	00:05	60.68333435	-65.40000153	60.66666794	-65.36666687	Moving	25	Clear or Partly Cloudy	-	Wavelets	0.3	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Desgagnes (cont'd)	Nordika Desgagnes	23-Oct-23	08:50	08:55	00:05	60.65000153	-65.30000305	60.63333511	-65.26667023	Moving	25	Clear or Partly Cloudy	-	Wavelets	0.3	Light Wind
	Nordika Desgagnes	23-Oct-23	09:05	09:10	00:05	60.63333511	-65.19999695	60.61666489	-65.1333313	Moving	25	Clear or Partly Cloudy	-	Wavelets	0.3	Light Wind
	Nordika Desgagnes	23-Oct-23	09:20	09:25	00:05	60.58333206	-65.09999847	60.56666565	-65.05000305	Moving	25	Clear or Partly Cloudy	-	Wavelets	0.3	Light Wind
	Nordika Desgagnes	23-Oct-23	09:35	09:40	00:05	60.56666565	-65	60.54999924	-64.96666718	Moving	25	Clear or Partly Cloudy	-	Wavelets	0.3	Light Wind
Woodwards	Tuvaq W.	27-Jul-23	20:34	20:40	00:06	64.15149689	-94.95050049	64.16699982	-94.98449707	Moving	10	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	0.3	Light Wind
Desgagnes	Marcellin A. Desgagnes	18-Oct-23	15:10	15:15	00:05	61.75	-69	61.75333405	-69.0083313	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	18-Oct-23	15:20	15:25	00:05	61.45333481	-69.00333405	61.45500183	-69.06500244	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin A. Desgagnes	23-Oct-23	20:30	20:35	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	23-Oct-23	20:40	20:45	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin A. Desgagnes	23-Oct-23	20:50	20:55	00:05	62.77999878	-92.09999847	62.77999878	-92.09999847	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
ATL	Atlantic Elm	14-Jul-23	12:00	12:30	00:30	63.13383484	-82.4343338	63.13416672	-82.60133362	Moving	-	Clear or Partly Cloudy	-	-	-	Light Wind
	Atlantic Elm	13-Jul-23	14:12	14:42	00:30	63.05066681	-76.1843338	63.05033493	-76.30033112	Moving	3	Fog	None	Glassy	0	Calm
Transport Desgagnes	Marcellin Desgagnes	20-Jul-23	15:30	15:35	00:05	63.59000015	-91.18000031	63.59000015	-91.21499634	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Calm
	Marcellin Desgagnes	20-Jul-23	15:37	15:42	00:05	63.59000015	-91.55833435	63.59000015	-91.2583313	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Calm
	Marcellin Desgagnes	20-Jul-23	15:44	15:49	00:05	63.59000015	-91.26000214	63	-91.29000092	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Calm
	Marcellin Desgagnes	20-Jul-23	15:51	15:56	00:05	63.59999847	-91.30000305	63.61000061	-91.33000183	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Calm
	Marcellin Desgagnes	20-Jul-23	15:58	16:03	00:05	63.63000107	-91.33000183	63.61999893	-91.36000061	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Calm
	Marcellin Desgagnes	20-Jul-23	16:04	16:09	00:05	63.61999893	-91.36000061	64.03666687	-91.40000153	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Calm
Coastal Shipping Ltd.	Kitikmeot	23-Jul-23	07:40	07:45	00:05	63.71733475	-91.85099792	63.71733475	-91.80066681	Moving	8	Clear or Partly Cloudy	None	-	-	Light Wind
	Kitikmeot	23-Jul-23	07:50	07:55	00:05	63.71749878	-91.75066376	63.70133209	-91.71666718	Moving	8	Clear or Partly Cloudy	None	-	-	Light Wind
	Kitikmeot	23-Jul-23	08:00	08:05	00:05	63.70033264	-91.66766357	63.68383408	-91.63400269	Moving	8	Clear or Partly Cloudy	None	-	-	Light Wind
	Kitikmeot	23-Jul-23	08:10	08:15	00:05	63.65066528	-91.60150146	63.65133286	-91.58416748	Moving	8	Clear or Partly Cloudy	None	-	-	Light Wind
	Kitikmeot	23-Jul-23	08:20	08:25	00:05	63.65066528	-91.56666565	63.6344986	-91.55000305	Moving	8	Clear or Partly Cloudy	None	-	-	Light Wind
	Kitikmeot	23-Jul-23	08:30	08:35	00:05	63.63333511	-91.5178299	63.63333511	-91.48366547	Moving	8	Clear or Partly Cloudy	None	-	-	Light Wind
	Kitikmeot	26-Jul-23	23:45	-	-	62.78416824	-91.98433685	-	-	Stationary	8	Clear or Partly Cloudy	None	Wavelets	0.5	Light Wind
	Kitikmeot	27-Jul-23	17:45	-	-	62.78466797	-92.08450317	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	-	-	Light Wind
	Kitikmeot	29-Jul-23	13:30	-	-	62.78466797	-92.08466339	-	-	Stationary	8	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kitikmeot	29-Jul-23	17:05	-	-	62.78466797	-92.08466339	-	-	Stationary	8	Clear or Partly Cloudy	None	Rippled	0.2	Light Wind
	Kitikmeot	30-Jul-23	08:00	-	-	62.78466797	-92.08466339	-	-	Stationary	8	Clear or Partly Cloudy	-	Glassy	0	Calm
	Kitikmeot	30-Jul-23	15:30	-	-	62.78450012	-91.98416901	-	-	Stationary	8	Clear or Partly Cloudy	None	Rippled	0.1	Light Wind
	Kitikmeot	31-Jul-23	05:20	-	-	62.78416824	-91.98366547	-	-	-	8	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Kitikmeot	1-Aug-23	08:15	-	-	62.78450012	-92.08450317	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	1-Aug-23	12:30	-	-	62.78450012	-92.08450317	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	2-Aug-23	14:45	-	-	62.78466797	-92.08466339	-	-	Stationary	8	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kitikmeot	3-Aug-23	09:15	-	-	62.78450012	-91.98400116	-	-	Stationary	8	Clear or Partly Cloudy	-	-	-	Calm
	Kitikmeot	3-Aug-23	16:15	-	-	62.78450012	-91.98416901	-	-	Stationary	8	Clear or Partly Cloudy	None	Rippled	0.2	Light Wind
	Kitikmeot	4-Aug-23	08:45	08:45	00:00	61.70050049	-89.45116425	61.70050049	-89.45116425	Moving	8	Clear or Partly Cloudy	None	Rippled	0.3	Light Wind
	Kitikmeot	4-Aug-23	08:58	09:05	00:07	61.66766739	-89.40049744	61.65133286	-89.36750031	Moving	8	Clear or Partly Cloudy	None	Rippled	0.3	Light Wind
	Kitikmeot	4-Aug-23	09:05	09:10	00:05	61.65083313	-89.35150146	61.63466644	-89.33399963	Moving	8	Clear or Partly Cloudy	None	Rippled	0.3	Light Wind
	Kitikmeot	4-Aug-23	09:15	09:20	00:05	61.63349915	-89.30133057	61.61733246	-89.28383636	Moving	8	Clear or Partly Cloudy	None	Rippled	0.3	Light Wind
	Kitikmeot	4-Aug-23	09:25	09:30	00:05	61.60100174	-89.25133514	61.6515007	-89.23349762	Moving	8	Clear or Partly Cloudy	None	Rippled	0.3	Light Wind
	Kitikmeot	4-Aug-23	09:35	09:40	00:05	61.58349991	-89.20083618	61.56716537	-89.1835022	Moving	8	Clear or Partly Cloudy	None	Rippled	0.3	Light Wind
	Kitikmeot	2-Aug-23	10:00	-	-	62.78466797	-92.08450317	-	-	Stationary	8	Clear or Partly Cloudy	None	Glassy	0	Light Wind
	Kitikmeot	27-Jul-23	17:45	-	-	62.78416824	-91.98433685	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kitikmeot	28-Jul-23	19:00	-	-	62.78466797	-92.08450317	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Light Wind
	Kitikmeot	4-Aug-23	13:07	13:12	00:05	61.06700134	-88.117836	61.05149841	-88.10050201	Moving	8	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Kitikmeot	4-Aug-23	13:15	13:20	00:05	61.05016708	-88.08416748	61.03383255	-88.06666565	Moving	8	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Kitikmeot	4-Aug-23	13:23	13:28	00:05	61.01816559	-88.11699677	61.01683426	-88.01799774	Moving	8	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Kitikmeot	4-Aug-23	13:30	13:35	00:05	61.00133514	-88.01699829	61.00133514	-88.01699829	Moving	8	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
	Kitikmeot	4-Aug-23	13:38	13:43	00:05	60.98433304	-87.96817017	60.96816635	-87.9509964	Moving	8	Clear or Partly Cloudy	None	Slight	0.5	Light Wind
Kitikmeot	4-Aug-23	13:45	13:50	00:05	60.96766663	-87.93482971	60.95149994	-87.91750336	Moving	8	Clear or Partly Cloudy	None	Slight	0.5	Light Wind	
Kitikmeot	5-Aug-23	10:05	10:10	00:05	58.06733322	-82.30149841	58.05133438	-82.28433228	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm	
Kitikmeot	5-Aug-23	10:13	10:18	00:05	58.05033493	-82.26766968	58.03450012	-82.23483276	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm	
Kitikmeot	5-Aug-23	10:20	10:25	00:05	58.0340004	-82.23483276	58.01800156	-82.21766663	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd. (cont'd)	Kitikmeot	5-Aug-23	10:30	10:35	00:05	58.01683426	-82.20033264	58.00049973	-82.16783142	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	5-Aug-23	10:40	10:45	00:05	57.98450089	-82.15083313	57.96816635	-82.13349915	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	5-Aug-23	10:50	10:55	00:05	57.96699905	-82.10116577	57.95083237	-82.08399963	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	5-Aug-23	15:00	15:05	00:05	57.38483429	-81.06666565	57.38366699	-81.0011673	Moving	8	Clear or Partly Cloudy	None	Glassy	0	Calm
	Kitikmeot	5-Aug-23	15:10	15:15	00:05	57.35133362	-80.98366547	57.34999847	-80.95116425	Moving	8	Clear or Partly Cloudy	None	Glassy	0	Calm
	Kitikmeot	5-Aug-23	15:20	15:25	00:05	57.33399963	-80.9343338	57.3176651	-80.91716766	Moving	8	Clear or Partly Cloudy	None	Glassy	0	Calm
	Kitikmeot	5-Aug-23	15:30	15:35	00:05	57.30149841	-80.88483429	57.30033493	-80.867836	Moving	8	Clear or Partly Cloudy	None	Glassy	0	Calm
	Kitikmeot	5-Aug-23	15:40	15:45	00:05	57.28433228	-80.85083008	57.26783371	-80.81800079	Moving	8	Clear or Partly Cloudy	None	Glassy	0	Calm
	Kitikmeot	5-Aug-23	15:50	15:55	00:05	57.26716614	-80.80149841	57.2508316	-80.78433228	Moving	8	Clear or Partly Cloudy	None	Glassy	0	Calm
	Kitikmeot	6-Aug-23	11:45	-	-	56.55066681	-79.21783447	-	-	Stationary	8	Clear or Partly Cloudy	None	Rippled	0.2	Light Wind
	Kitikmeot	6-Aug-23	15:30	-	-	56.55066681	-79.21783447	-	-	Stationary	8	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kitikmeot	7-Aug-23	08:00	-	-	56.55066681	-79.21783447	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	8-Aug-23	08:30	-	-	56.55066681	-79.21783447	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	0	Calm
	Kitikmeot	8-Aug-23	12:00	-	-	56.55083466	-79.21783447	-	-	Stationary	8	Clear or Partly Cloudy	Bright on Observer's Side	-	-	Calm
	Kitikmeot	9-Aug-23	07:10	07:15	00:05	59.13366699	-79.35133362	59.15016556	-79.35133362	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Slight	2	Strong Wind
	Kitikmeot	9-Aug-23	07:20	07:25	00:05	59.1515007	-79.35083008	59.18333435	-79.35050201	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Slight	2	Strong Wind
	Kitikmeot	9-Aug-23	07:30	07:35	00:05	59.18483353	-79.35016632	59.20116806	-79.34999847	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Slight	2	Strong Wind
	Kitikmeot	9-Aug-23	07:40	07:45	00:05	59.21766663	-79.33466339	59.23400116	-79.33450317	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Slight	2	Strong Wind
	Kitikmeot	9-Aug-23	07:50	07:55	00:05	59.25066757	-79.33416748	59.26750183	-79.33399963	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Slight	2	Strong Wind
	Kitikmeot	9-Aug-23	08:00	08:05	00:05	59.28383255	-79.33383179	59.30016708	-79.33366394	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Slight	2	Strong Wind
	Kitikmeot	9-Aug-23	13:00	13:05	00:05	60.13366699	-79.23466492	60.1503334	-79.23466492	Moving	8	Clear or Partly Cloudy	None	Moderate	3	Gale Force Wind
	Kitikmeot	9-Aug-23	13:10	13:15	00:05	60.16683197	-79.23449707	60.18333435	-79.23433685	Moving	8	Clear or Partly Cloudy	None	Moderate	3	Gale Force Wind
	Kitikmeot	9-Aug-23	13:20	13:25	00:05	60.18483353	-79.23416901	60.20133209	-79.23416901	Moving	8	Clear or Partly Cloudy	None	Moderate	3	Gale Force Wind
	Kitikmeot	9-Aug-23	13:30	13:35	00:05	60.21766663	-79.23383331	60.23416519	-79.23366547	Moving	8	Clear or Partly Cloudy	None	Moderate	3	Gale Force Wind
	Kitikmeot	9-Aug-23	13:40	13:45	00:05	60.25049973	-79.23349762	60.26699829	-79.23332977	Moving	8	Clear or Partly Cloudy	None	Moderate	3	Gale Force Wind
	Kitikmeot	9-Aug-23	13:50	13:55	00:05	60.28333282	-79.21817017	60.29999924	-79.21800232	Moving	8	Clear or Partly Cloudy	None	Moderate	3	Gale Force Wind
	Kitikmeot	10-Aug-23	07:20	07:25	00:05	62.61750031	-76.85050201	62.61750031	-76.81783295	Moving	8	Cloudy	-	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	07:30	07:35	00:05	62.61733246	-76.78433228	62.61716843	-76.81716919	Moving	8	Cloudy	-	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	07:40	07:45	00:05	62.61716843	-76.71716309	62.61700058	-76.6843338	Moving	8	Cloudy	-	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	07:50	07:55	00:05	62.61683273	-76.65116882	62.61666489	-76.617836	Moving	8	Cloudy	-	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	08:00	08:05	00:05	62.61666489	-76.58450317	62.61666489	-76.5510025	Moving	8	Cloudy	-	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	08:10	08:15	00:05	62.60150146	-76.5178299	62.60150146	-76.48449707	Moving	8	Cloudy	-	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	13:30	13:35	00:05	62.53416824	-74.68333435	62.5340004	-74.63466644	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	13:40	13:45	00:05	62.53383255	-74.56700134	62.53366852	-74.46716309	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	13:50	13:55	00:05	-	-	62.53366852	-74.48383331	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	14:00	14:05	00:05	62.53333282	-74.45016479	62.53333282	-74.40116882	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	14:10	14:15	00:05	62.51800156	-74.36683655	62.51783371	-74.3176651	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Kitikmeot	10-Aug-23	14:20	14:25	00:05	62.51783371	-74.28383636	62.51766586	-74.23483276	Moving	8	Cloudy	None	Wavelets	1	Light Wind
	Kitikmeot	11-Aug-23	09:10	09:15	00:05	61.40050125	-66.63349915	61.38483429	-66.60016632	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Calm
	Kitikmeot	11-Aug-23	09:20	09:25	00:05	61.38433456	-66.5668335	61.38383484	-67.20016479	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Calm
Kitikmeot	11-Aug-23	09:30	09:35	00:05	61.36816788	-66.50033569	61.36766815	-66.46700287	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Calm	
Kitikmeot	11-Aug-23	09:40	09:45	00:05	61.36700058	-66.43367004	61.35133362	-66.38483429	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Calm	
Kitikmeot	11-Aug-23	09:50	09:55	00:05	61.35066605	-66.35133362	61.35016632	-66.31816864	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Calm	
Kitikmeot	11-Aug-23	10:00	10:05	00:05	61.33433151	-66.28433228	61.33383179	-66.33383179	Moving	8	Clear or Partly Cloudy	Bright on Observer's Side	Wavelets	1	Calm	
Kivalliq W.	11-Aug-23	08:00	08:05	00:05	64.28483582	-95.95016479	64.28483582	-95.95050049	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Calm	
Kivalliq W.	11-Aug-23	08:06	08:11	00:05	64.28483582	-95.95050049	64.28483582	-95.95050049	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Calm	
Kivalliq W.	11-Aug-23	08:12	08:17	00:05	64.28483582	-95.95033264	64.28483582	-95.95033264	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Calm	
Kivalliq W.	11-Aug-23	08:18	08:23	00:05	64.28483582	-95.95016479	64.28483582	-95.95033264	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Calm	
Kivalliq W.	11-Aug-23	08:24	08:29	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Calm	
Kivalliq W.	11-Aug-23	08:30	08:35	00:05	64.28483582	-95.9335022	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Calm	
Kivalliq W.	12-Aug-23	20:05	20:10	00:05	64.30000305	-95.95016479	64.30000305	-95.95016479	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	-	
Kivalliq W.	12-Aug-23	20:35	20:40	00:05	64.30000305	-95.95016479	64.30049896	-95.95016479	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	-	
Kivalliq W.	12-Aug-23	20:55	21:00	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	-	
Kivalliq W.	12-Aug-23	21:10	21:15	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	-	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	12-Aug-23	21:30	21:35	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	-
	Kivalliq W.	12-Aug-23	21:50	21:55	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	-
	Kivalliq W.	13-Aug-23	09:30	09:35	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	13-Aug-23	09:36	09:41	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	13-Aug-23	09:42	09:47	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	13-Aug-23	09:48	09:53	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	13-Aug-23	09:54	09:59	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	13-Aug-23	10:00	10:05	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	14-Aug-23	20:00	20:05	00:05	64.11733246	-94.3666687	64.11733246	-94.3666687	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	14-Aug-23	20:40	20:45	00:05	64.11733246	-94.36683655	64.11733246	-94.36699677	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	14-Aug-23	21:00	21:05	00:05	64.11733246	-94.36683655	64.11733246	-94.36683655	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	14-Aug-23	21:20	21:25	00:05	64.11733246	-94.36683655	64.11733246	-94.3666687	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	14-Aug-23	21:40	21:45	00:05	64.11733246	-94.3666687	64.11733246	-94.3666687	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	14-Aug-23	22:00	22:05	00:05	64.11733246	-94.3666687	64.11733246	-94.3666687	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	15-Aug-23	21:30	21:35	00:05	64.11733246	-91.35133362	64.11733246	-91.35133362	Stationary	-	Cloudy	-	-	-	Light Wind
	Kivalliq W.	15-Aug-23	21:36	21:41	00:05	64.11733246	-94.35150146	64.11733246	-94.35150146	Stationary	-	Cloudy	-	-	-	Light Wind
	Kivalliq W.	15-Aug-23	21:48	21:53	00:05	64.11733246	-92.35150146	64.11733246	-94.35150146	Stationary	-	Cloudy	-	-	-	Light Wind
	Kivalliq W.	15-Aug-23	21:54	21:53	23:59	64.11733246	-94.35150146	64.11733246	-94.35150146	Stationary	-	Cloudy	-	-	-	Light Wind
	Kivalliq W.	15-Aug-23	21:54	21:59	00:05	64.11683655	-94.35150146	64.11683655	-94.35150146	Stationary	-	Cloudy	-	-	-	Light Wind
	Kivalliq W.	15-Aug-23	22:00	22:05	00:05	64.11683655	-94.35150146	64.11683655	-92.35150146	Stationary	-	Cloudy	-	-	-	Light Wind
	Kivalliq W.	17-Aug-23	10:00	10:05	00:05	64.30000305	-95.93482971	64.30016327	-95.93482971	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Kivalliq W.	17-Aug-23	10:06	10:11	00:05	64.30000305	-95.93482971	64.30000305	-95.93482971	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Kivalliq W.	17-Aug-23	10:12	10:17	00:05	64.28483582	-95.94999695	64.28483582	-95.94999695	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Kivalliq W.	17-Aug-23	10:18	10:23	00:05	64.28483582	-95.94999695	64.30000305	-95.94999695	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Kivalliq W.	17-Aug-23	10:24	10:29	00:05	64.30000305	-95.94999695	64.30000305	-95.94999695	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Kivalliq W.	17-Aug-23	10:30	10:35	00:05	64.30000305	-95.94999695	64.30000305	-95.93333435	Stationary	10	Cloudy	None	Wavelets	0.5	Light Wind
	Kivalliq W.	19-Aug-23	08:00	08:05	00:05	64.30016327	-95.93450165	64.30016327	-95.93450165	Stationary	10	Clear or Partly Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	19-Aug-23	08:06	08:11	00:05	64.30000305	-95.93482971	64.30000305	-95.94999695	Stationary	10	Clear or Partly Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	19-Aug-23	08:08	08:17	00:09	64.28483582	-95.94999695	64.28483582	-95.94999695	Stationary	10	Clear or Partly Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	19-Aug-23	08:18	08:23	00:05	64.30000305	-95.94999695	64.30000305	-95.93482971	Stationary	10	Clear or Partly Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	19-Aug-23	08:24	08:29	00:05	64.30000305	-95.93450165	64.28483582	-95.93450165	Stationary	10	Clear or Partly Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	19-Aug-23	08:30	08:35	00:05	64.28483582	-95.93450165	64.30000305	-95.94999695	Stationary	10	Clear or Partly Cloudy	-	Wavelets	0.5	Light Wind
	Kivalliq W.	20-Aug-23	01:00	01:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	20-Aug-23	02:00	02:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	20-Aug-23	03:00	03:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	20-Aug-23	03:00	03:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	20-Aug-23	03:30	03:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	20-Aug-23	05:30	05:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	21-Aug-23	12:00	12:05	00:05	64.30000305	-95.93450165	64.30000305	-95.93450165	Stationary	10	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	21-Aug-23	12:06	12:11	00:05	64.28466797	-95.94999695	64.28466797	-95.94999695	Stationary	10	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	21-Aug-23	12:12	12:17	00:05	64.28483582	-95.94999695	64.28450012	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	21-Aug-23	12:18	12:23	00:05	64.28450012	-95.94999695	64.28450012	-95.94999695	Stationary	10	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	21-Aug-23	12:24	12:29	00:05	64.28450012	-95.94999695	64.28450012	-95.94999695	Stationary	10	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	21-Aug-23	12:30	12:35	00:05	64.30000305	-95.93450165	64.30016327	-95.94999695	Stationary	10	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
Kivalliq W.	22-Aug-23	01:00	01:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	None	Rippled	-	Light Wind	
Kivalliq W.	22-Aug-23	02:00	02:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	None	Rippled	-	Light Wind	
Kivalliq W.	22-Aug-23	03:00	03:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	None	Rippled	-	Light Wind	
Kivalliq W.	22-Aug-23	04:00	04:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	None	Rippled	-	Light Wind	
Kivalliq W.	22-Aug-23	04:30	04:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	None	Rippled	-	Light Wind	
Kivalliq W.	22-Aug-23	05:00	05:05	00:05	65.16733551	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	None	Rippled	-	Light Wind	
Kivalliq W.	23-Aug-23	01:00	01:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Kivalliq W.	23-Aug-23	02:05	02:10	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Kivalliq W.	23-Aug-23	02:40	02:45	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Kivalliq W.	23-Aug-23	03:00	03:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	



APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	28-Aug-23	03:30	03:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	Slight/ Grey	Rippled	0	Light Wind
	Kivalliq W.	28-Aug-23	05:00	05:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Cloudy	Slight/ Grey	Rippled	0	Light Wind
	Kivalliq W.	29-Aug-23	11:00	11:05	00:05	64.28483582	-95.93450165	64.28483582	-95.93450165	Stationary	7	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	29-Aug-23	11:06	11:11	00:05	64.28483582	-95.94999695	64.28483582	-95.94999695	Stationary	7	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	29-Aug-23	11:12	11:17	00:05	64.28483582	-95.94999695	64.28483582	-95.94999695	Stationary	7	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	29-Aug-23	11:18	11:23	00:05	64.30000305	-95.94999695	64.30000305	-95.94999695	Stationary	7	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	29-Aug-23	11:24	11:29	00:05	64.30000305	-95.94999695	64.30000305	-95.94999695	Stationary	7	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	29-Aug-23	11:30	11:35	00:05	64.30000305	-95.94999695	64.30000305	-95.94999695	Stationary	7	Clear or Partly Cloudy	None	Slight	0.7	Strong Wind
	Kivalliq W.	30-Aug-23	01:00	01:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	30-Aug-23	02:00	02:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	30-Aug-23	02:30	02:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	30-Aug-23	03:00	03:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	30-Aug-23	04:00	04:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	30-Aug-23	05:30	05:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Calm
	Kivalliq W.	31-Aug-23	00-01-02 00-01-02 00		00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Kivalliq W.	31-Aug-23	01:00	01:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Kivalliq W.	31-Aug-23	02:00	02:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Kivalliq W.	31-Aug-23	03:00	03:05	00:05	64.117836	-94.35133362	64.117836	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Kivalliq W.	31-Aug-23	03:30	03:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	5	Clear or Partly Cloudy	None	Rippled	0	Light Wind
	Kivalliq W.	30-Jul-23	12:00	12:05	00:05	64.30000305	-95.95016479	64.30000305	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.3	Calm
	Kivalliq W.	30-Jul-23	12:06	12:11	00:05	64.30000305	-95.95016479	64.30000305	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.3	Calm
	Kivalliq W.	30-Jul-23	12:18	12:17	23:59	64.30000305	-95.93399811	64.30000305	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.3	Calm
	Kivalliq W.	30-Jul-23	12:18	12:23	00:05	64.30000305	-95.93399811	64.30000305	-95.93399811	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.3	Calm
	Kivalliq W.	30-Jul-23	12:24	12:29	00:05	64.30000305	-95.93399811	64.30000305	-95.93399811	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.3	Calm
	Kivalliq W.	30-Jul-23	12:30	12:35	00:05	64.30000305	-95.95016479	64.30000305	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.3	Calm
	Kivalliq W.	1-Aug-23	10:00	10:05	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.3	Light Wind
	Kivalliq W.	1-Aug-23	10:06	10:11	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.3	Light Wind
	Kivalliq W.	1-Aug-23	10:12	10:17	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.3	Light Wind
	Kivalliq W.	1-Aug-23	10:18	10:23	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.3	Light Wind
	Kivalliq W.	1-Aug-23	10:24	10:29	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.3	Light Wind
	Kivalliq W.	1-Aug-23	10:30	10:35	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.3	Light Wind
	Kivalliq W.	2-Aug-23	01:00	01:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Slight	1.5	Strong Wind
	Kivalliq W.	2-Aug-23	02:00	02:05	00:05	64.11733246	-94.35133362	64.11816406	-94.35133362	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Slight	1.5	Strong Wind
	Kivalliq W.	2-Aug-23	03:00	03:05	00:05	64.11816406	-94.35133362	64.11733246	-94.35133362	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Slight	1.5	Strong Wind
	Kivalliq W.	2-Aug-23	04:00	04:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Slight	1.5	Strong Wind
	Kivalliq W.	2-Aug-23	04:30	04:35	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Slight	1.5	Strong Wind
	Kivalliq W.	2-Aug-23	05:00	05:05	00:05	64.11733246	-94.35133362	64.11733246	-94.35133362	Stationary	3	Clear or Partly Cloudy	Slight/ Grey	Slight	1.5	Strong Wind
	Kivalliq W.	3-Aug-23	12:00	12:05	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.3	Light Wind
	Kivalliq W.	3-Aug-23	12:06	12:11	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.3	Light Wind
	Kivalliq W.	3-Aug-23	12:12	12:17	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.3	Light Wind
	Kivalliq W.	3-Aug-23	12:18	12:23	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.3	Light Wind
	Kivalliq W.	3-Aug-23	12:24	12:29	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.3	Light Wind
	Kivalliq W.	3-Aug-23	12:30	12:35	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	None	Wavelets	0.3	Light Wind
	Kivalliq W.	5-Aug-23	11:30	11:35	00:05	64.20016479	-94.48366547	64.20016479	-94.48383331	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kivalliq W.	5-Aug-23	11:36	11:41	00:05	64.11733246	-94.48366547	64.11683655	-94.48366547	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kivalliq W.	5-Aug-23	11:42	11:47	00:05	64.11733246	-94.48366547	64.11683655	-94.48366547	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kivalliq W.	5-Aug-23	11:48	11:53	00:05	64.11733246	-94.36683655	64.11733246	-94.36683655	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kivalliq W.	5-Aug-23	11:54	11:59	00:05	64.11733246	-94.36683655	64.11733246	-94.36683655	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kivalliq W.	5-Aug-23	12:00	12:05	00:05	64.11733246	-94.36683655	64.11733246	-94.36683655	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.2	Calm
	Kivalliq W.	7-Aug-23	12:00	12:05	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
Kivalliq W.	7-Aug-23	12:06	12:11	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind	
Kivalliq W.	7-Aug-23	12:12	12:17	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind	
Kivalliq W.	7-Aug-23	12:18	12:23	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind	
Kivalliq W.	7-Aug-23	12:24	12:29	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	7-Aug-23	12:30	12:35	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Wavelets	0.5	Light Wind
	Kivalliq W.	9-Aug-23	13:00	13:05	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.2	Light Wind
	Kivalliq W.	9-Aug-23	13:06	13:11	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.2	Light Wind
	Kivalliq W.	9-Aug-23	13:12	13:17	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.2	Light Wind
	Kivalliq W.	9-Aug-23	13:18	13:23	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.2	Light Wind
	Kivalliq W.	9-Aug-23	13:24	13:29	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.2	Light Wind
	Kivalliq W.	9-Aug-23	13:30	13:35	00:05	64.28483582	-95.95016479	64.28483582	-95.95016479	Stationary	10	Clear or Partly Cloudy	Slight/ Grey	Rippled	0.2	Light Wind
	Kivalliq W.	10-Aug-23	20:05	20:10	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	6	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind
	Kivalliq W.	10-Aug-23	20:15	20:20	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	6	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind
	Kivalliq W.	10-Aug-23	20:40	20:45	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	6	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind
Kivalliq W.	10-Aug-23	21:00	21:05	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	6	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Kivalliq W.	10-Aug-23	21:20	21:25	00:05	64.30049896	-95.95016479	64.30049896	-95.95016479	Stationary	6	Clear or Partly Cloudy	Slight/ Grey	Rippled	0	Light Wind	
Transport Desgagnes	Marcellin Desgagnes	25-Jul-23	12:00	12:05	00:05	63.93999863	-93.59166718	63.93999863	-93.59166718	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	14	Calm
	Marcellin Desgagnes	25-Jul-23	12:10	12:15	00:05	63.93999863	-93.59166718	63.93999863	-93.59166718	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	14	Calm
	Marcellin Desgagnes	25-Jul-23	12:20	12:25	00:05	63.93999863	-93.59166718	63.93999863	-93.59166718	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	14	Calm
	Marcellin Desgagnes	25-Jul-23	12:30	12:35	00:05	63.93999863	-93.59166718	63.93999863	-93.59166718	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	14	Calm
	Marcellin Desgagnes	25-Jul-23	12:40	12:45	00:05	63.93999863	-93.59166718	63.93999863	-93.59166718	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	14	Calm
	Marcellin Desgagnes	25-Jul-23	12:50	12:55	00:05	64.56833649	-93.98666382	64.56833649	-93.98666382	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Glassy	14	Calm
	Marcellin Desgagnes	1-Aug-23	10:00	10:56	00:56	62.65000153	-78.27166748	62.65166855	-78.19999695	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Marcellin Desgagnes	1-Aug-23	10:10	10:15	00:05	62.65333176	-78.16500092	62.65166855	-78.09999847	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Marcellin Desgagnes	1-Aug-23	10:17	10:22	00:05	62.65166855	-78.09500122	62.65000153	-78.02999878	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Marcellin Desgagnes	1-Aug-23	10:25	10:30	00:05	62.63999939	-78.01667023	62.63999939	-77.97000122	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Marcellin Desgagnes	1-Aug-23	10:45	10:50	00:05	62.64333344	-77.83999634	62.64166641	-77.79333496	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Marcellin Desgagnes	1-Aug-23	10:51	10:56	00:05	62.63999939	-77.76999664	62.63999939	-77.72000122	Moving	10	Clear or Partly Cloudy	Slight/ Grey	Glassy	0	Light Wind
	Marcellin Desgagnes	1-Aug-23	13:00	13:05	00:05	62.62666702	-76.6783371	62.62666702	-76.6783371	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Marcellin Desgagnes	1-Aug-23	13:10	13:15	00:05	62.72000122	-76.54166412	62.67166519	-76.53666687	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Marcellin Desgagnes	1-Aug-23	13:20	13:25	00:05	62.66999817	-76.54166412	62.68999863	-76.45166779	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Marcellin Desgagnes	1-Aug-23	13:30	13:35	00:05	62.61000061	-76.43166351	62.61000061	-76.36000061	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Marcellin Desgagnes	1-Aug-23	13:40	13:45	00:05	62.61000061	-76.36000061	62.59999847	-76.30999756	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Marcellin Desgagnes	1-Aug-23	13:30	13:55	00:25	62.60666656	-76.29000092	62.60333252	-76.21333313	Moving	10	Clear or Partly Cloudy	None	Wavelets	2	Light Wind
	Marcellin Desgagnes	2-Aug-23	11:00	11:05	00:05	60.68000031	-66.04000092	60.59000015	-65.94999695	Moving	1	Fog	None	Slight	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	11:05	11:10	00:05	60.59000015	-65.94999695	60.58000183	-65.90000153	Moving	1	Fog	None	Slight	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	11:10	11:15	00:05	60.58000183	-65.90000153	60.58000183	-65.84999847	Moving	1	Fog	None	Slight	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	11:16	11:21	00:05	60.59000015	-65.83000183	60.59000015	-65.83000183	Moving	1	Fog	None	Slight	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	11:22	11:27	00:05	60.59000015	-65.83000183	60.58000183	-65.80999756	Moving	1	Fog	None	Slight	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	11:28	11:32	00:04	60.58000183	-65.79000092	60.58000183	-65.76999664	Moving	1	Fog	None	Slight	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	13:00	13:05	00:05	60.54000092	-65.01000214	60.52000046	-65.01166534	Moving	9	Clear or Partly Cloudy	None	Wavelets	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	13:10	13:15	00:05	60.56000137	-64.94000244	60.5316658	-64.38166809	Moving	9	Clear or Partly Cloudy	None	Wavelets	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	13:20	13:25	00:05	60.5316658	-64.38166809	60.5233345	-64.26166534	Moving	9	Clear or Partly Cloudy	None	Wavelets	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	13:30	13:35	00:05	60.52166748	-64.26000214	60.52166748	-64.26000214	Moving	9	Clear or Partly Cloudy	None	Wavelets	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	13:40	13:45	00:05	60.52000046	-64.25	60.52000046	-64.23833466	Moving	9	Clear or Partly Cloudy	None	Wavelets	2	Strong Wind
	Marcellin Desgagnes	2-Aug-23	13:50	13:35	23:45	60.50999832	-60.18999863	60.50166702	-60.1866684	Moving	9	Clear or Partly Cloudy	None	Wavelets	2	Strong Wind
	Marcellin Desgagnes	26-Jul-23	11:00	11:05	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	2	Strong Wind
	Marcellin Desgagnes	26-Jul-23	11:10	11:15	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	2	Strong Wind
Marcellin Desgagnes	26-Jul-23	11:20	11:25	00:05	63.93999863	-93.59999847	-	-93.59999847	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	2	Strong Wind	
Marcellin Desgagnes	26-Jul-23	11:30	11:35	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	2	Strong Wind	
Marcellin Desgagnes	26-Jul-23	11:40	11:45	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	2	Strong Wind	
Marcellin Desgagnes	26-Jul-23	11:50	11:55	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	2	Strong Wind	
Marcellin Desgagnes	27-Jul-23	11:00	11:05	00:05	63.94333267	-93.58999634	63.94333267	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	
Marcellin Desgagnes	27-Jul-23	11:10	11:15	00:05	63.94333267	-93.58999634	63.94333267	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	
Marcellin Desgagnes	27-Jul-23	11:20	11:25	00:05	63.94333267	-93.58999634	63.94333267	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	
Marcellin Desgagnes	27-Jul-23	11:30	11:35	00:05	63.94333267	-93.58999634	63.94333267	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	
Marcellin Desgagnes	27-Jul-23	11:40	11:45	00:05	63.94333267	-93.58999634	63.94333267	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	
Marcellin Desgagnes	27-Jul-23	11:50	11:55	00:05	63.94333267	-93.58999634	63.94333267	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Wavelets	2	Calm	



APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Transport Desgagnes <i>(cont'd)</i>	Marcellin Desgagnes	28-Jul-23	12:00	12:05	00:05	63.93999863	-93.58999634	63.95000076	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	28-Jul-23	12:10	12:15	00:05	63.95000076	-93.58999634	62.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	28-Jul-23	12:20	12:25	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	28-Jul-23	12:30	12:35	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	28-Jul-23	12:40	12:45	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	28-Jul-23	12:50	12:55	00:05	63.93999863	-93.59500122	63.93999863	-93.59500122	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	29-Jul-23	11:00	11:05	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Calm
	Marcellin Desgagnes	29-Jul-23	11:10	11:15	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Calm
	Marcellin Desgagnes	29-Jul-23	11:20	11:25	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Calm
	Marcellin Desgagnes	29-Jul-23	11:30	11:35	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Calm
	Marcellin Desgagnes	29-Jul-23	11:40	11:45	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Calm
	Marcellin Desgagnes	29-Jul-23	11:50	11:55	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Calm
	Marcellin Desgagnes	30-Jul-23	11:00	11:05	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	30-Jul-23	11:10	11:15	00:05	63.93999863	-93.58999634	-	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	30-Jul-23	11:20	11:25	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	30-Jul-23	11:30	11:35	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	30-Jul-23	11:40	11:45	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	30-Jul-23	11:50	11:55	00:05	63.93999863	-93.58999634	63.93999863	-93.58999634	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	31-Jul-23	15:19	15:24	00:05	62.7183342	-87.56999969	62.75333405	-87.53333282	Moving	12	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Calm
	Marcellin Desgagnes	31-Jul-23	15:28	15:33	00:05	62.76333237	-87.54333496	62.75833511	-87.45666504	Moving	12	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Calm
	Marcellin Desgagnes	31-Jul-23	15:38	15:43	00:05	62.75833511	-87.46666718	62.74166489	-87.45999908	Moving	12	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Calm
	Marcellin Desgagnes	31-Jul-23	15:45	15:50	00:05	62.77999878	-87.47166443	62.77000046	-87.30666351	Moving	12	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Calm
	Marcellin Desgagnes	31-Jul-23	15:55	16:00	00:05	62.70000076	-87.30166626	62.61333466	-87.29000092	Moving	12	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Calm
	Marcellin Desgagnes	31-Jul-23	16:05	16:10	00:05	62.76666641	-87.26833344	62.63999939	-87.11000061	Moving	12	Clear or Partly Cloudy	Slight/ Grey	Wavelets	1	Calm
	Marcellin Desgagnes	31-Jul-23	18:10	18:15	00:05	62.45833206	-86.16666412	62.44666672	-86.1166687	Moving	6	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	31-Jul-23	18:18	18:23	00:05	62.44333267	-86.96166992	62.44833374	-86.5616684	Moving	6	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	31-Jul-23	18:25	18:30	00:05	62.43166733	-86.36166382	62.41999817	-85.98332977	Moving	6	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	31-Jul-23	18:32	18:57	00:25	62.41833496	-85.90833282	62.41166687	-85.93166351	Moving	6	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	31-Jul-23	18:39	18:44	00:05	62.40000153	-85.91500092	62.39833345	-85.87333679	Moving	6	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	31-Jul-23	18:45	18:50	00:05	62.39500046	-85.85832977	62.38666534	-85.81833649	Moving	6	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	17-Jul-23	11:10	11:15	00:05	60.6883316	-66.09166718	60.69499969	-66.14333344	Moving	10	Cloudy	None	Rippled	0.5	Calm
	Marcellin Desgagnes	17-Jul-23	11:40	11:45	00:05	60.71500015	-66.31333316	60.72166824	-66.35832977	Moving	10	Cloudy	None	Rippled	0.5	Calm
	Marcellin Desgagnes	17-Jul-23	11:50	11:55	00:05	60.72499847	-66.38666534	60.72833252	-66.43333435	Moving	10	Cloudy	None	Rippled	0.5	Calm
	Marcellin Desgagnes	17-Jul-23	-	-	-	-	-	-	-	Moving	10	Cloudy	None	Rippled	0.5	Calm
	Marcellin Desgagnes	17-Jul-23	13:07	13:12	00:05	60.84999847	-66.95333099	60.84833145	-66.97333527	Moving	18	Cloudy	None	Slight	0.7	Strong Wind
	Marcellin Desgagnes	17-Jul-23	13:41	13:46	00:05	60.87833405	-67.99500275	60.88666534	-67.27999878	Moving	18	Cloudy	None	Slight	0.7	Strong Wind
	Marcellin Desgagnes	17-Jul-23	13:50	13:55	00:05	60.90166855	-67.21666718	60.91166687	-67.21666718	Moving	18	Cloudy	None	Slight	0.7	Strong Wind
	Marcellin Desgagnes	18-Jul-23	13:00	13:05	00:05	62.48166656	-74.35832977	62.48833466	-74.36166382	Moving	2	Fog	None	Rippled	3	Light Wind
	Marcellin Desgagnes	18-Jul-23	13:30	13:45	00:15	62.49499893	-74.21333313	62.48333359	-74.42166901	Moving	2	Fog	None	Rippled	3	Light Wind
	Marcellin Desgagnes	18-Jul-23	13:40	13:45	00:05	62.4683342	-74.49500275	62.44666672	-74.44833374	Moving	2	Fog	None	Rippled	3	Light Wind
	Marcellin Desgagnes	19-Jul-23	14:00	14:05	00:05	62.18000031	-84.37000275	62.18999863	-84.37666321	Moving	7	Clear or Partly Cloudy	None	Slight	1	Calm
	Marcellin Desgagnes	19-Jul-23	14:35	14:40	00:05	62.10333252	-84.55999756	62.17499924	-84.5633316	Moving	7	Clear or Partly Cloudy	None	Slight	1	Calm
	Marcellin Desgagnes	19-Jul-23	14:45	14:50	00:05	62.13000107	-84.64666748	62.15000153	-84.63666534	Moving	7	Clear or Partly Cloudy	None	Slight	1	Calm
	Marcellin Desgagnes	19-Jul-23	15:50	15:55	00:05	62.21500015	-84.98166656	62.22000122	-85	Moving	10	Clear or Partly Cloudy	-	Moderate	1.5	Strong Wind
	Marcellin Desgagnes	19-Jul-23	16:18	16:23	00:05	62.25333405	-85.18333435	62.25999832	-85.22166443	Moving	10	Clear or Partly Cloudy	-	Moderate	1.5	Strong Wind
Marcellin Desgagnes	19-Jul-23	16:25	16:30	00:05	62.61999893	-85.23166656	-	-	Moving	10	Clear or Partly Cloudy	-	Moderate	1.5	Strong Wind	
Marcellin Desgagnes	20-Jul-23	13:00	13:05	00:05	63.38166809	-90.60166931	63.38833237	-90.64167023	Moving	10	Clear or Partly Cloudy	None	Wavelets	3	Light Wind	
Marcellin Desgagnes	20-Jul-23	13:10	13:15	00:05	63.41333389	-90.61333466	63.47499847	-90.73500061	Moving	10	Clear or Partly Cloudy	None	Wavelets	3	Light Wind	
Marcellin Desgagnes	20-Jul-23	13:20	13:25	00:05	63.4383316	-90.76166534	63.48666763	-90.76166534	Moving	10	Clear or Partly Cloudy	None	Wavelets	3	Light Wind	
Marcellin Desgagnes	20-Jul-23	13:30	13:35	00:05	63.45000076	-90.79166412	63.49000168	-90.70999908	Moving	10	Clear or Partly Cloudy	None	Wavelets	3	Light Wind	
Marcellin Desgagnes	20-Jul-23	13:40	13:45	00:05	63.46166611	-90.71833038	63.46333313	-90.71666718	Moving	10	Clear or Partly Cloudy	None	Wavelets	3	Light Wind	
Marcellin Desgagnes	20-Jul-23	13:50	13:55	00:05	63.49166489	-90.80166626	63.49833298	-90.90000153	Moving	10	Clear or Partly Cloudy	None	Wavelets	3	Light Wind	
Marcellin Desgagnes	21-Jul-23	11:00	11:05	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	Stationary	5	Clear or Partly Cloudy	None	Rippled	2	Calm	
Marcellin Desgagnes	21-Jul-23	11:10	11:15	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	Stationary	5	Clear or Partly Cloudy	None	Rippled	2	Calm	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Transport Desgagnes (cont'd)	Marcellin Desgagnes	21-Jul-23	11:20	11:25	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	Stationary	5	Clear or Partly Cloudy	None	Rippled	2	Calm
	Marcellin Desgagnes	21-Jul-23	11:30	11:35	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	Stationary	5	Clear or Partly Cloudy	None	Rippled	2	Calm
	Marcellin Desgagnes	21-Jul-23	11:40	11:45	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	Stationary	5	Clear or Partly Cloudy	None	Rippled	2	Calm
	Marcellin Desgagnes	21-Jul-23	11:50	11:55	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	Stationary	5	Clear or Partly Cloudy	None	Rippled	2	Calm
	Marcellin Desgagnes	22-Jul-23	12:00	12:05	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	-	6	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	22-Jul-23	12:10	12:15	00:05	63.94333267	-93.59833527	63.94333267	-93.59833527	-	6	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	22-Jul-23	12:20	12:25	00:05	63.95333481	-93.59833527	63.94333267	-93.59833527	-	6	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	22-Jul-23	12:30	12:35	00:05	63.94333267	-93.59666443	63.94333267	-93.59500122	-	6	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	22-Jul-23	12:40	12:45	00:05	63.94333267	-93.59333038	63.94333267	-93.59333038	-	6	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	23-Jul-23	11:00	11:05	00:05	63.94499969	-93.59999847	63.94499969	-93.54833221	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	23-Jul-23	11:10	11:15	00:05	63.94499969	-93.59999847	63.94499969	-93.54833221	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	23-Jul-23	11:20	11:25	00:05	63.94499969	-93.59999847	63.94499969	-93.54833221	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	23-Jul-23	11:30	11:35	00:05	63.94499969	-93.59999847	63.94499969	-93.54833221	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	23-Jul-23	11:40	11:45	00:05	63.94499969	-93.59999847	63.94499969	-93.54833221	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	23-Jul-23	11:50	11:55	00:05	63.94499969	-93.59999847	63.94499969	-93.54833221	Stationary	10	Clear or Partly Cloudy	None	Glassy	1	Light Wind
	Marcellin Desgagnes	24-Jul-23	11:00	-	-	63.94499969	-93.59833527	63.99333191	-93.59833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	24-Jul-23	-	-	-	63.94499969	-93.59833527	63.99333191	-93.59833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	24-Jul-23	-	-	-	63.94499969	-93.59833527	63.99333191	-93.59833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	24-Jul-23	-	-	-	63.94499969	-93.59833527	63.99333191	-93.59833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	24-Jul-23	-	-	-	63.94499969	-93.59833527	63.99333191	-93.59833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	24-Jul-23	-	-	-	63.94499969	-93.59833527	63.99333191	-93.59833527	Stationary	10	Clear or Partly Cloudy	None	Rippled	2	Light Wind
	Marcellin Desgagnes	18-Aug-23	14:00	14:05	00:05	60.57333374	-65.13833618	60.57666779	-65.14167023	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	18-Aug-23	14:10	14:15	00:05	60.57633209	-65.20333099	60.97399902	-65.23733521	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	18-Aug-23	14:20	14:25	00:05	61.01816559	-65.26533508	60.59316635	-65.3219986	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	18-Aug-23	14:30	14:35	00:05	60.59500122	-65.34333038	60.59833145	-65.36833191	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	18-Aug-23	14:40	14:45	00:05	60.60333252	-65.40333557	60.60833359	-65.4466629	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	18-Aug-23	14:50	14:55	00:05	60.61166763	-65.48000336	60.61500168	-65.51166534	Moving	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	09:40	09:45	00:05	62.35333252	-72.66000366	62.36999893	-72.69999695	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	09:50	09:55	00:05	62.38000107	-72.73999786	62.38999939	-72.76999664	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	10:05	10:10	00:05	62.40999985	-72.83000183	62.43000031	-72.87000275	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	10:15	10:20	00:05	62.43000031	-72.88999939	62.45000076	-72.94999695	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	10:25	10:30	00:05	62.45999908	-72.95999908	62.45999908	-72.98000336	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	10:35	10:40	00:05	62.47000122	-73.19999695	62.47999954	-73.5	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	19-Aug-23	12:00	12:05	00:05	62.53499985	-73.6166687	62.53833389	-73.6883316	Moving	9	Clear or Partly Cloudy	-	Rippled	0	Light Wind
	Marcellin Desgagnes	19-Aug-23	12:10	12:15	00:05	62.54000092	-73.6966629	62.53166658	-73.74500275	Moving	9	Clear or Partly Cloudy	-	Rippled	0	Light Wind
	Marcellin Desgagnes	19-Aug-23	12:20	12:25	00:05	65.53333282	-73.77833557	65.28333282	-73.82666779	Moving	9	Clear or Partly Cloudy	-	Rippled	0	Light Wind
	Marcellin Desgagnes	19-Aug-23	12:30	12:35	00:05	62.52666855	-73.87333679	62.50999832	-73.76333618	Moving	9	Clear or Partly Cloudy	-	Rippled	0	Light Wind
	Marcellin Desgagnes	19-Aug-23	12:40	12:45	00:05	62.51166534	-73.79499817	62.52000046	-73.33999634	Moving	9	Clear or Partly Cloudy	-	Rippled	0	Light Wind
	Marcellin Desgagnes	19-Aug-23	12:50	12:55	00:05	62.52000046	-74.76166534	62.52000046	-74.10166931	Moving	9	Clear or Partly Cloudy	-	Rippled	0	Light Wind
	Marcellin Desgagnes	20-Aug-23	08:45	08:50	00:05	62.5	-82.36499786	62.5	-82.39833069	Moving	10	Clear or Partly Cloudy	None	Rough	2	Strong Wind
	Marcellin Desgagnes	20-Aug-23	09:15	09:20	00:05	62.40000153	-82.51999664	62.29999924	-82.55000305	Moving	10	Clear or Partly Cloudy	None	Rough	2	Strong Wind
Marcellin Desgagnes	20-Aug-23	09:15	09:20	00:05	62.29999924	-82.58000183	62.20000076	-82.65000153	Moving	10	Clear or Partly Cloudy	None	Rough	2	Strong Wind	
Marcellin Desgagnes	20-Aug-23	09:30	09:35	00:05	62.09999847	-82.69999695	62.09999847	-82.73000336	Moving	10	Clear or Partly Cloudy	None	Rough	2	Strong Wind	
Marcellin Desgagnes	20-Aug-23	09:40	09:45	00:05	62.09999847	-82.76999664	62	-82.80999756	Moving	10	Clear or Partly Cloudy	None	Rough	2	Strong Wind	
Marcellin Desgagnes	20-Aug-23	09:50	09:55	00:05	62	-82.85500336	62	-82.97000122	Moving	10	Clear or Partly Cloudy	None	Rough	2	Strong Wind	
Marcellin Desgagnes	20-Aug-23	12:00	12:05	00:05	61.98666763	-83.8133316	61.99000168	-83.88500214	Moving	8	Clear or Partly Cloudy	None	Slight	2	Light Wind	
Marcellin Desgagnes	20-Aug-23	12:10	12:15	00:05	61.99333191	-83.89167023	61.99333191	-83.9366684	Moving	8	Clear or Partly Cloudy	None	Slight	2	Light Wind	
Marcellin Desgagnes	20-Aug-23	12:20	12:25	00:05	61.09999847	-83.98332977	61.99666595	-	Moving	8	Clear or Partly Cloudy	None	Slight	2	Light Wind	
Marcellin Desgagnes	20-Aug-23	12:30	12:35	00:05	62	-83.12000275	62.09999847	-83.12999725	Moving	8	Clear or Partly Cloudy	None	Slight	2	Light Wind	
Marcellin Desgagnes	20-Aug-23	12:40	12:45	00:05	62.09999847	-83.12999725	62	-83.1883316	Moving	8	Clear or Partly Cloudy	None	Slight	2	Light Wind	
Marcellin Desgagnes	20-Aug-23	12:50	12:55	00:05	62.29999924	-84.19333649	62.31000137	-84.21166992	Moving	8	Clear or Partly Cloudy	None	Slight	2	Light Wind	
Marcellin Desgagnes	21-Aug-23	20:00	20:05	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
Marcellin Desgagnes	21-Aug-23	20:00	20:15	00:15	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Light Wind	
Marcellin Desgagnes	21-Aug-23	20:20	20:25	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Light Wind	



APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Transport Desgagnes (cont'd)	Marcellin Desgagnes	30-Aug-23	11:25	11:30	00:05	63.93333435	-93.58333588	63.83333206	-93.58333588	Stationary	10	Clear or Partly Cloudy	None	Rippled	1.5	Calm
	Marcellin Desgagnes	30-Aug-23	11:35	11:40	00:05	65.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	10	Clear or Partly Cloudy	None	Rippled	1.5	Calm
	Marcellin Desgagnes	30-Aug-23	11:45	11:50	00:05	63.83333206	-93.58333588	63.93333435	-93.58333588	Stationary	10	Clear or Partly Cloudy	None	Rippled	1.5	Calm
	Marcellin Desgagnes	31-Aug-23	09:05	09:10	00:05	62.20999908	-84.94999695	62.20000076	-84.88999939	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	31-Aug-23	09:45	09:50	00:05	62.15000153	-84.62999725	62.13000107	-84.55999756	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	31-Aug-23	09:55	10:00	00:05	62.11999893	-84.51999664	62.11999893	-84.48999786	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	31-Aug-23	10:05	10:10	00:05	62.11000061	-84.48999786	62.09999847	-84.37999725	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	31-Aug-23	10:15	10:25	00:10	62.90000153	-84.26999664	62.5	-84.16000366	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	31-Aug-23	10:25	10:30	00:05	62	-84.5	62	-83.94000244	Moving	10	Clear or Partly Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Sep-23	09:10	09:15	00:05	62.75999832	-72.70999908	62.52999878	-72.66000366	Moving	10	Cloudy	-	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Sep-23	09:20	09:25	00:05	62.31999969	-72.62000275	62.31000137	-72.58000183	Moving	10	Cloudy	-	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Sep-23	09:30	09:35	00:05	62.29999924	-72.54000092	62.29000092	-72.48999786	Moving	10	Cloudy	-	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Sep-23	09:40	09:45	00:05	62.27999878	-72.45999908	62.27000046	-72.43000031	Moving	10	Cloudy	-	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Sep-23	09:50	09:55	00:05	62.25999832	-72.40000153	62.25	-72.37000275	Moving	10	Cloudy	-	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Sep-23	10:00	10:05	00:05	62.24000168	-72.33999634	62.22999954	-72.30000305	Moving	10	Cloudy	-	Wavelets	1	Light Wind
	Marcellin Desgagnes	20-Sep-23	11:00	11:05	00:05	61.98166656	-83.95166779	61.98500061	-83.9916687	Moving	9	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	20-Sep-23	11:10	11:15	00:05	61.98500061	-83	61.98666763	-84.40000153	Moving	9	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	20-Sep-23	11:20	11:25	00:05	61.99000168	-84.40000153	61.99000168	-84.1333313	Moving	9	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	20-Sep-23	11:30	11:35	00:05	61.99166489	-84.15166473	61.99166489	-84.1966629	Moving	9	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	20-Sep-23	11:40	11:45	00:05	61.99333191	-84.23833466	61.99333191	-84.28166962	Moving	9	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	20-Sep-23	11:50	11:55	00:05	61.99666595	-84.3116684	61.99833298	-84.34833527	Moving	9	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	21-Sep-23	08:00	08:05	00:05	61.75833511	-92.08166504	61.75833511	-92.08166504	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	21-Sep-23	08:10	18:15	10:05	61.75833511	-92.08166504	61.75833511	-92.08166504	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	21-Sep-23	08:20	08:25	00:05	61.75833511	-92.08166504	61.75833511	-92.08166504	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	21-Sep-23	08:30	08:35	00:05	61.75833511	-92.08166504	61.75833511	-92.08166504	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	21-Sep-23	08:40	08:45	00:05	62.75833511	-92.08166504	62.75833511	-92.08166504	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	21-Sep-23	08:50	08:55	00:05	61.75833511	-92.08166504	61.75833511	-92.08166504	Stationary	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind
	Marcellin Desgagnes	22-Sep-23	13:00	13:05	00:05	61.93333435	-93.6166687	63.03333282	-93.6166687	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Marcellin Desgagnes	22-Sep-23	13:10	13:15	00:05	63.93500137	-93.6166687	63.93500137	-93.6166687	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Marcellin Desgagnes	22-Sep-23	13:20	13:25	00:05	63.93500137	-93.6166687	63.93500137	-93.6166687	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Marcellin Desgagnes	22-Sep-23	13:30	13:35	00:05	63.93500137	-93.6166687	63.93500137	-93.6166687	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Marcellin Desgagnes	22-Sep-23	13:40	13:45	00:05	63.93500137	-93.6166687	63.93500137	-93.6166687	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Marcellin Desgagnes	22-Sep-23	13:50	13:55	00:05	63.93500137	-93.6166687	63.93500137	-93.6166687	Stationary	10	Clear or Partly Cloudy	Bright on Observer's Side	Rippled	0.5	Light Wind
	Marcellin Desgagnes	23-Sep-23	22:00	22:05	00:05	63.93333435	-93.59999847	63.93333435	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	23-Sep-23	22:10	22:15	00:05	63.93333435	-93.59999847	63.93333435	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	23-Sep-23	22:20	22:25	00:05	63.93333435	-93.59999847	63.93333435	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	23-Sep-23	22:30	22:35	00:05	63.93333435	-93.59999847	63.93333435	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	23-Sep-23	22:40	22:45	00:05	63.93333435	-93.59999847	63.93333435	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	23-Sep-23	22:50	22:55	00:05	63.93333435	-93.59999847	63.93333435	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	24-Sep-23	21:00	21:05	00:05	63.56000137	-93.36000061	63.56000137	-93.36000061	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Calm
	Marcellin Desgagnes	24-Sep-23	21:15	21:20	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Calm
Marcellin Desgagnes	24-Sep-23	21:25	21:30	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	24-Sep-23	21:35	21:40	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	24-Sep-23	21:45	21:50	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	24-Sep-23	21:55	22:00	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	25-Sep-23	21:00	21:05	00:05	63.93999863	-93.59999847	-	-	Stationary	6	Cloudy	None	Wavelets	2	Gale Force Wind	
Marcellin Desgagnes	25-Sep-23	21:10	21:15	00:05	63.93999863	-93.59999847	63.93999863	-93.59999847	Stationary	6	Cloudy	None	Wavelets	2	Gale Force Wind	
Marcellin Desgagnes	25-Sep-23	21:20	21:25	00:05	63.93999863	-93.59999847	-	-	Stationary	6	Cloudy	None	Wavelets	2	Gale Force Wind	
Marcellin Desgagnes	25-Sep-23	21:30	21:35	00:05	63.93000031	-93.59999847	-	-	Stationary	6	Cloudy	None	Wavelets	2	Gale Force Wind	
Marcellin Desgagnes	25-Sep-23	21:40	21:45	00:05	63.93000031	-93.59999847	-	-	Stationary	6	Cloudy	None	Wavelets	2	Gale Force Wind	
Marcellin Desgagnes	25-Sep-23	21:50	21:55	00:05	63.93000031	-93.59999847	-	-	Stationary	6	Cloudy	None	Wavelets	2	Gale Force Wind	
Marcellin Desgagnes	26-Sep-23	21:00	21:05	00:05	63.93000031	-93.59999847	-	-	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin Desgagnes	26-Sep-23	21:10	21:15	00:05	63.93000031	-93.59999847	-	-	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	
Marcellin Desgagnes	26-Sep-23	21:20	21:25	00:05	63.93000031	-93.59999847	-	-	Stationary	10	Cloudy	None	Rippled	1	Strong Wind	

APPENDIX E: SEABIRD SURVEY DATA, 2023

Company/ Agency	Platform Name	Survey Date	Time at Start	Time at End	Effort	Start Latitude	Longitude Start	Latitude End	Longitude End	Platform Activity	Visibility (km)	Weather	Glare Conditions	Sea State Code	Wave Height (m)	Beaufort Scale
Transport Desgagnes (cont'd)	Marcellin Desgagnes	26-Sep-23	21:30	21:35	00:05	63.93000031	-93.59999847	-	-	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	26-Sep-23	21:40	21:35	23:55	63.93000031	-93.59999847	-	-	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	26-Sep-23	21:50	21:55	00:05	63.93000031	-93.59999847	-	-	Stationary	10	Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	27-Sep-23	22:00	22:05	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	27-Sep-23	22:10	22:15	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	27-Sep-23	22:20	22:25	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	27-Sep-23	22:30	22:35	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	27-Sep-23	22:45	22:45	00:00	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	27-Sep-23	22:50	22:55	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Light Wind
	Marcellin Desgagnes	28-Sep-23	21:00	21:05	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	28-Sep-23	21:10	21:15	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	28-Sep-23	21:20	21:25	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	28-Sep-23	21:30	21:35	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	28-Sep-23	21:40	12:45	15:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	28-Sep-23	21:50	21:55	00:05	63.93000031	-93.59999847	63.93000031	-93.59999847	Stationary	10	Clear or Partly Cloudy	None	Rippled	1	Strong Wind
	Marcellin Desgagnes	30-Sep-23	10:00	10:05	00:05	63	-84.24833679	63	-84.19000244	Moving	6	Cloudy	Slight/ Grey	Slight	2	Strong Wind
	Marcellin Desgagnes	30-Sep-23	10:10	10:15	00:05	63.00166702	-84.14666748	63.00166702	-84.10666656	Moving	6	Cloudy	Slight/ Grey	Slight	2	Strong Wind
	Marcellin Desgagnes	30-Sep-23	10:20	10:25	00:05	63.03499985	-84.05666351	63.04166794	-84	Moving	6	Cloudy	Slight/ Grey	Slight	2	Strong Wind
	Marcellin Desgagnes	30-Sep-23	10:30	10:35	00:05	63.04833221	-84.95666504	63.05666733	-84.91333008	Moving	6	Cloudy	Slight/ Grey	Slight	2	Strong Wind
	Marcellin Desgagnes	30-Sep-23	10:40	10:45	00:05	63.06166684	-83.87833405	63.06999969	-83.82333374	Moving	6	Cloudy	Slight/ Grey	Slight	2	Strong Wind
	Marcellin Desgagnes	30-Sep-23	10:50	10:55	00:05	63.06999969	-83.82333374	63.08000183	-83.84166718	Moving	6	Cloudy	Slight/ Grey	Slight	2	Strong Wind
	Marcellin Desgagnes	30-Sep-23	13:00	13:05	00:05	63.15833282	-82.72000122	63.15333176	-82.65333557	Moving	10	Clear or Partly Cloudy	-	Slight	2	Light Wind
	Marcellin Desgagnes	30-Sep-23	13:10	13:15	00:05	63.15333176	-82.65333557	63.15333176	-82.65333557	Moving	10	Clear or Partly Cloudy	-	Slight	2	Light Wind
	Marcellin Desgagnes	30-Sep-23	13:20	13:25	00:05	63.15000153	-82.52999878	63.14833345	-82.44833374	Moving	10	Clear or Partly Cloudy	-	Slight	2	Light Wind
	Marcellin Desgagnes	30-Sep-23	13:30	13:35	00:05	63.14833345	-82.44833374	63.14333344	-82.40666962	Moving	10	Clear or Partly Cloudy	-	Slight	2	Light Wind
	Marcellin Desgagnes	30-Sep-23	13:40	13:45	00:05	63.14666748	-82.30500031	63.13666534	-82.31500244	Moving	10	Clear or Partly Cloudy	-	Slight	2	Light Wind
	Marcellin Desgagnes	30-Sep-23	13:30	13:35	00:05	63.13333511	-82.27500153	63.13166809	-82.24666595	Moving	10	Clear or Partly Cloudy	-	Slight	2	Light Wind
	Marcellin Desgagnes	1-Oct-23	10:00	10:05	00:05	62.17833328	-71.70166779	62.16833496	-71.66500092	Moving	9	Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Oct-23	10:10	10:15	00:05	62.14500046	-71.56500244	62.15166855	-71.59500122	Moving	9	Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Oct-23	10:20	10:25	00:05	62.14500046	-71.56500244	62.13833237	-71.53666687	Moving	9	Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Oct-23	10:30	10:35	00:05	62.12833405	-71.49500275	62.11000061	-71.41500092	Moving	9	Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Oct-23	10:40	10:45	00:05	62.11000061	-71.41500092	62.10499954	-71.39167023	Moving	9	Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Oct-23	10:50	10:55	00:05	62.09000015	-71.34833527	62.08000183	-71.31999969	Moving	9	Cloudy	None	Wavelets	1	Light Wind
	Marcellin Desgagnes	1-Oct-23	13:00	13:05	00:05	61.86999893	-70.45999908	61.86333466	-70.04166412	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin Desgagnes	1-Oct-23	13:10	13:15	00:05	61.85499954	-70.37166595	61.84666824	-70.32833099	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin Desgagnes	1-Oct-23	13:20	13:25	00:05	61.84333342	-70.29333496	61.83333206	-70.26000214	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin Desgagnes	1-Oct-23	13:30	13:35	00:05	61.81666565	-70.20999908	61.81666565	-70.17833371	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin Desgagnes	1-Oct-23	13:40	13:45	00:05	61.81333316	-70.14666748	61.80333328	-70.11166382	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin Desgagnes	1-Oct-23	13:50	13:55	00:05	61.79666519	-70.08333588	61.78833389	-70.09500122	Moving	10	Cloudy	None	Rippled	0	Light Wind
	Marcellin Desgagnes	29-Aug-23	20:00	20:05	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Calm
	Marcellin Desgagnes	29-Aug-23	20:10	20:15	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Calm
	Marcellin Desgagnes	29-Aug-23	20:20	20:25	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Calm
Marcellin Desgagnes	29-Aug-23	20:30	20:35	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	29-Aug-23	20:40	20:45	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	29-Aug-23	20:50	20:55	00:05	63.93333435	-93.58333588	63.93333435	-93.58333588	Stationary	5	Clear or Partly Cloudy	None	Rippled	1	Calm	
Marcellin Desgagnes	18-Sep-23	13:00	13:05	00:05	60.54999924	-64.96666718	60.54999924	-64.98332977	Moving	0.1	Fog	-	Rippled	0.5	Light Wind	
Marcellin Desgagnes	18-Sep-23	13:10	13:15	00:05	60.55166626	-65	60.55166626	-65.03333282	Moving	0.1	Fog	-	Rippled	0.5	Light Wind	
Marcellin Desgagnes	18-Sep-23	13:20	13:25	00:05	60.55166626	-65.05166626	60.56833267	-65.08499908	Moving	0.1	Fog	-	Rippled	0.5	Light Wind	
Marcellin Desgagnes	18-Sep-23	13:30	13:35	00:05	60.56666565	-65.08499908	60.56833267	-65.15000153	Moving	0.1	Fog	-	Rippled	0.5	Light Wind	
Marcellin Desgagnes	18-Sep-23	13:40	13:45	00:05	60.56833267	-65.18499756	60.56833267	-65.21666718	Moving	0.1	Fog	-	Rippled	0.5	Light Wind	
Marcellin Desgagnes	19-Sep-23	13:00	13:05	00:05	62.5	-74.40000153	62.5	-74.45166779	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind	
Marcellin Desgagnes	19-Sep-23	13:30	13:35	00:05	62.50166702	-74.66666412	62.5	-74.71666718	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind	
Marcellin Desgagnes	19-Sep-23	13:40	13:45	00:05	62.50166702	-74.75	62.5	-74.71666718	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind	
Marcellin Desgagnes	19-Sep-23	13:50	13:55	00:05	62.50166702	-74.75166321	62.51833344	-74.80000305	Moving	10	Clear or Partly Cloudy	None	Rippled	0.5	Light Wind	

# APPENDIX F SEABIRD OBSERVATION DATA, 2023



APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction	
Desgagnes	Miena Desgagnes	26-Jun-23	Northern Fulmar	47	Both	-	A	Rafting	360	
	Miena Desgagnes	26-Jun-23	Northern Fulmar	137	Both	-	-	Other	-	
	Miena Desgagnes	26-Jun-23	Northern Fulmar	90	Both	-	-	Other	-	
	Miena Desgagnes	27-Jun-23	Northern Fulmar	15	Both	-	-	Other	360	
	Miena Desgagnes	27-Jun-23	Northern Fulmar	14	Both	-	-	Other	360	
	Miena Desgagnes	27-Jun-23	Northern Fulmar	25	Both	-	-	Other	360	
	Miena Desgagnes	28-Jun-23	Unknown Bird	15	Fly	-	B	Escape Flight	180	
	Miena Desgagnes	28-Jun-23	Northern Fulmar	1	Fly	-	B	Escape Flight	360	
	Miena Desgagnes	28-Jun-23	Northern Fulmar	10	Both	-	-	Other	360	
	Miena Desgagnes	28-Jun-23	Unknown Bird	25	Both	-	-	Other	360	
	Miena Desgagnes	29-Jun-23	Razorbill	30	Both	-	-	Other	-	
	Miena Desgagnes	29-Jun-23	Herring Gull	11	Both	-	-	Other	-	
	Miena Desgagnes	29-Jun-23	Razorbill	5	Both	-	-	Other	-	
	Miena Desgagnes	29-Jun-23	Herring Gull	20	Both	-	-	Other	-	
	Miena Desgagnes	29-Jun-23	Razorbill	12	Both	-	-	Other	-	
	Miena Desgagnes	29-Jun-23	Herring Gull	15	Both	-	-	Other	-	
	Miena Desgagnes	30-Jun-23	Herring Gull	5	Both	-	-	Other	-	
	Miena Desgagnes	30-Jun-23	Herring Gull	10	Both	-	-	Other	-	
	Miena Desgagnes	30-Jun-23	Razorbill	15	Both	-	-	Escape Flight	-	
	Miena Desgagnes	30-Jun-23	Razorbill	30	Fly	-	-	Escape Flight	-	
	Miena Desgagnes	1-Jul-23	Herring Gull	40	Fly	-	A	Escape Flight	-	
	Miena Desgagnes	1-Jul-23	Herring Gull	54	Fly	-	-	Escape Flight	-	
	Miena Desgagnes	1-Jul-23	Herring Gull	35	Fly	-	-	Escape Flight	-	
	Miena Desgagnes	3-Jul-23	Unknown Murre	8	Water	No	C	Rafting	-	
	Miena Desgagnes	3-Jul-23	Herring Gull	2	Fly	No	B	Other	180	
	Miena Desgagnes	4-Jul-23	Herring Gull	4	Fly	No	D	Flying	200	
	Miena Desgagnes	4-Jul-23	Northern Fulmar	3	Water	No	B	Feeding	-	
	Miena Desgagnes	4-Jul-23	Unknown Murre	7	Water	No	D	Feeding	-	
	Miena Desgagnes	5-Jul-23	Northern Fulmar	4	Fly	No	B	Flying	-	
	Miena Desgagnes	6-Jul-23	Unknown Murre	9	Water	No	D	Feeding	-	
	Miena Desgagnes	6-Jul-23	Northern Fulmar	2	Fly	No	E	Flying	180	
	Miena Desgagnes	7-Jul-23	Northern Fulmar	6	Fly	No	E	Other	-	
	Miena Desgagnes	8-Jul-23	Unknown Murre	6	Water	No	C	Rafting	-	
	Miena Desgagnes	9-Jul-23	Unknown Bird	1	Fly	No	A	Flying	15	
	Desgagnes Transarctik	Miena Desgagnes	30-Jul-23	Razorbill	1	Fly	Yes	B	Escape Flight	295
		Miena Desgagnes	30-Jul-23	Razorbill	2	Fly	Yes	B	-	205
		Miena Desgagnes	30-Jul-23	Northern Fulmar	1	Fly	Yes	C	-	310
		Miena Desgagnes	30-Jul-23	Razorbill	1	Fly	Yes	B	-	245
Miena Desgagnes		31-Jul-23	Razorbill	2	Fly	Yes	C	-	258	
Miena Desgagnes		31-Jul-23	Razorbill	1	Fly	Yes	A	-	210	
Miena Desgagnes		31-Jul-23	Razorbill	4	Fly	Yes	C	-	258	
Miena Desgagnes		31-Jul-23	Razorbill	6	Fly	Yes	C	-	258	
Miena Desgagnes		31-Jul-23	Razorbill	2	Fly	Yes	B	-	270	
Miena Desgagnes		31-Jul-23	Razorbill	1	Fly	Yes	B	-	258	
Miena Desgagnes		31-Jul-23	Razorbill	1	Water	Yes	C	-	-	
Miena Desgagnes		31-Jul-23	Razorbill	1	Fly	Yes	C	-	180	
Miena Desgagnes		6-Aug-23	Herring Gull	1	Fly	No	C	-	0	
Miena Desgagnes		9-Aug-23	Herring Gull	1	Fly	No	D	-	0	
Miena Desgagnes		13-Aug-23	Unknown Gull	1	Fly	Yes	B	-	330	
Miena Desgagnes		13-Aug-23	Unknown Gull	2	Fly	Yes	B	-	-	
Miena Desgagnes		4-Sep-23	Northern Fulmar	15	Fly	Yes	C	Escape Flight	360	
Miena Desgagnes		4-Sep-23	Pomarine Jaeger	1	Fly	Yes	C	Escape Flight	297	
Miena Desgagnes		4-Sep-23	Northern Fulmar	15	Fly	Yes	B	Escape Flight	-	
Miena Desgagnes		4-Sep-23	Northern Fulmar	15	Fly	Yes	C	Escape Flight	-	
Miena Desgagnes		4-Sep-23	Northern Fulmar	15	Fly	Yes	C	Escape Flight	-	
Miena Desgagnes		4-Sep-23	Northern Fulmar	7	-	Yes	B	Escape Flight	-	
Miena Desgagnes		4-Sep-23	Northern Fulmar	2	Fly	Yes	-	Escape Flight	245	
Miena Desgagnes		5-Sep-23	Unknown Gull	1	Fly	Yes	B	-	360	
Miena Desgagnes		5-Sep-23	Unknown Bird	25	Fly	Yes	C	-	180	
Miena Desgagnes		6-Sep-23	Cackling/Canada Goose	71	Fly	Yes	C	-	180	
Miena Desgagnes		6-Sep-23	Northern Fulmar	1	Fly	Yes	C	-	180	
Miena Desgagnes		6-Sep-23	Unknown Gull	1	Fly	Yes	B	-	360	
Miena Desgagnes		6-Sep-23	Unknown Bird	1	Fly	Yes	A	-	-	
Miena Desgagnes		6-Sep-23	Unknown Gull	1	Fly	Yes	C	-	250	
Miena Desgagnes		7-Sep-23	Unknown Goose	1	Fly	Yes	E	-	180	
Miena Desgagnes		8-Sep-23	Northern Fulmar	1	Fly	Yes	A	-	280	
Miena Desgagnes		14-Sep-23	Pomarine Jaeger	1	Fly	Yes	C	-	45	
Miena Desgagnes		15-Sep-23	Cackling/Canada Goose	4	Fly	Yes	D	-	180	
Miena Desgagnes		15-Sep-23	Northern Fulmar	1	Fly	Yes	E	-	360	
Desgagnes		Miena Desgagnes	2-Oct-23	Cackling/Canada Goose	8	Fly	Yes	B	Flying	250
		Miena Desgagnes	2-Oct-23	Northern Fulmar	3	Fly	Yes	B	-	360
		Miena Desgagnes	2-Oct-23	Unknown Gull	1	Fly	Yes	B	-	270
	Miena Desgagnes	2-Oct-23	Unknown Bird	2	Fly	Yes	C	-	330	
	Miena Desgagnes	11-Oct-23	Northern Fulmar	2	-	No	E	-	-	
	Miena Desgagnes	16-Oct-23	Unknown Gull	5	Fly	Yes	A	Flying	0	
	Miena Desgagnes	16-Oct-23	Unknown Jaeger	10	Fly	Yes	A	Flying	160	
	Miena Desgagnes	16-Oct-23	Northern Fulmar	2	Fly	Yes	B	Flying	80	
	Miena Desgagnes	16-Oct-23	Unknown Gull	10	Fly	Yes	B	Flying	270	
	Miena Desgagnes	18-Oct-23	Unknown Gull	2	Fly	Yes	A	Flying	150	
	Miena Desgagnes	18-Oct-23	Unknown Murre	3	Fly	Yes	B	Flying	320	
Woodwards	Tuvaq W.	22-Jul-23	Herring Gull	1	Fly	No	E	Flying	90	
	Tuvaq W.	22-Jul-23	Herring Gull	20	Fly	No	E	Other	-	
	Tuvaq W.	22-Jul-23	Herring Gull	38	Land	No	D	Other	-	
	Tuvaq W.	22-Jul-23	Unknown Duck	2	Water	No	E	Rafting	-	
	Tuvaq W.	22-Jul-23	Herring Gull	1	Fly	No	E	Rafting	350	
	Tuvaq W.	22-Jul-23	Herring Gull	1	Land	No	D	Other	-	
	Tuvaq W.	22-Jul-23	Herring Gull	1	Fly	No	D	Other	200	
	Tuvaq W.	23-Jul-23	Herring Gull	1	Fly	No	E	Rafting	-	
	Tuvaq W.	23-Jul-23	Surf Scoter	1	Water	No	D	Flying	75	
	Tuvaq W.	23-Jul-23	Herring Gull	1	Fly	No	E	Flying	75	
	Tuvaq W.	23-Jul-23	Herring Gull	1	Land	No	C	Other	-	
	Tuvaq W.	23-Jul-23	Common Loon	2	Fly	Yes	D	Flying	20	
	Tuvaq W.	24-Jul-23	Herring Gull	1	Fly	No	E	Flying	300	
	Tuvaq W.	25-Jul-23	Herring Gull	50	Land	No	D	Other	-	

APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction
Woodwards (cont'd)	Tuvaq W.	25-Jul-23	Black Guillemot	1	Water	No	D	Other	-
	Tuvaq W.	25-Jul-23	Herring Gull	1	Land	No	E	Other	-
	Tuvaq W.	25-Jul-23	Herring Gull	1	Fly	No	E	Flying	80
	Tuvaq W.	25-Jul-23	Red-breasted Merganser	1	Fly	Yes	D	Flying	270
	Tuvaq W.	26-Jul-23	Herring Gull	1	Fly	No	E	Flying	130
	Tuvaq W.	26-Jul-23	Common Loon	3	Water	No	D	Other	-
	Tuvaq W.	26-Jul-23	Herring Gull	60	Land	No	D	Other	-
	Tuvaq W.	27-Jul-23	Herring Gull	50	Land	No	D	Other	-
	Tuvaq W.	27-Jul-23	Herring Gull	1	Fly	Yes	C	Flying	130
	Tuvaq W.	27-Jul-23	Herring Gull	1	Fly	No	D	Flying	130
	Tuvaq W.	27-Jul-23	Herring Gull	4	Fly	No	E	Flying	290
Tuvaq W.	27-Jul-23	Herring Gull	35	Land	No	D	Other	-	
Desgagnes	Marcellin A. Desgagnes	19-Oct-23	Northern Fulmar	2	Fly	Yes	A	Escape Flight	138
	Marcellin A. Desgagnes	30-Oct-23	Unknown Bird	1	Fly	Yes	A	Escape Flight	39
	Marcellin A. Desgagnes	31-Oct-23	Dovekie	1	Fly	Yes	B	Escape Flight	119
	Marcellin A. Desgagnes	31-Oct-23	Dovekie	1	Fly	Yes	B	Escape Flight	270
	Nordika Desgagnes	4-Jul-23	Unknown Gull	3	Fly	Yes	A	Escape Flight	330
	Nordika Desgagnes	4-Jul-23	Razorbill	1	Water	No	A	Rafting	30
	Nordika Desgagnes	4-Jul-23	Unknown Jaeger	4	Fly	No	B	Other	35
	Nordika Desgagnes	4-Jul-23	Unknown Jaeger	2	Fly	No	C	Escape Flight	345
	Nordika Desgagnes	4-Jul-23	Northern Fulmar	2	Fly	No	C	Escape Flight	316
	Nordika Desgagnes	5-Jul-23	Unknown Jaeger	1	Fly	Yes	C	Other	250
	Nordika Desgagnes	5-Jul-23	Unknown Jaeger	2	Fly	No	C	Other	320
	Nordika Desgagnes	5-Jul-23	Herring Gull	1	Fly	No	A	Rafting	-
	Nordika Desgagnes	5-Jul-23	Unknown Jaeger	1	Fly	No	B	Other	40
	Nordika Desgagnes	5-Jul-23	Unknown Murre	1	Fly	No	B	Other	27
	Nordika Desgagnes	5-Jul-23	Unknown Murre	2	Fly	No	B	Other	220
	Nordika Desgagnes	5-Jul-23	Herring Gull	1	Fly	No	B	Other	40
	Nordika Desgagnes	6-Jul-23	Northern Fulmar	1	Fly	No	A	Escape Flight	321
	Nordika Desgagnes	7-Jul-23	Parasitic Jaeger	1	Fly	Yes	A	Other	116
	Nordika Desgagnes	7-Jul-23	Common Eider	11	Fly	Yes	A	Other	206
	Nordika Desgagnes	7-Jul-23	Unknown Murre	2	Fly	No	A	Other	296
	Nordika Desgagnes	7-Jul-23	Razorbill	1	Fly	Yes	A	Other	206
	Nordika Desgagnes	7-Jul-23	Black Guillemot	5	Water	No	B	Other	-
	Nordika Desgagnes	7-Jul-23	Unknown Murre	1	Water	No	A	Other	-
	Nordika Desgagnes	7-Jul-23	Razorbill	2	Fly	Yes	A	Other	296
	Nordika Desgagnes	7-Jul-23	Razorbill	5	Water	No	B	Other	-
	Nordika Desgagnes	7-Jul-23	Unknown Murre	3	Water	No	B	Other	-
	Nordika Desgagnes	7-Jul-23	Razorbill	2	Water	No	C	Other	-
	Nordika Desgagnes	7-Jul-23	Razorbill	1	Fly	Yes	A	Escape Flight	211
	Nordika Desgagnes	8-Jul-23	Northern Fulmar	2	Fly	No	B	Escape Flight	182
	Nordika Desgagnes	9-Jul-23	Northern Fulmar	2	Fly	No	B	Escape Flight	300
	Nordika Desgagnes	9-Jul-23	Herring Gull	2	Fly	Yes	C	Other	240
	Nordika Desgagnes	9-Jul-23	Razorbill	1	Water	No	B	Other	-
	Nordika Desgagnes	9-Jul-23	Herring Gull	1	Fly	Yes	A	Other	185
	Nordika Desgagnes	9-Jul-23	Razorbill	2	Fly	No	C	Other	200
	Nordika Desgagnes	9-Jul-23	Unknown Murre	2	Fly	No	A	Escape Flight	190
	Nordika Desgagnes	9-Jul-23	Unknown Murre	2	Fly	Yes	B	Other	160
	Nordika Desgagnes	9-Jul-23	Herring Gull	1	Fly	No	A	Other	340
	Nordika Desgagnes	9-Jul-23	Northern Fulmar	2	Fly	No	C	Other	200
	Nordika Desgagnes	9-Jul-23	Herring Gull	2	Fly	No	B	Other	270
	Nordika Desgagnes	9-Jul-23	Herring Gull	1	Fly	No	C	Other	300
	Nordika Desgagnes	10-Jul-23	Razorbill	3	Fly	No	D	Rafting	-
	Nordika Desgagnes	10-Jul-23	Northern Fulmar	1	Fly	Yes	D	Escape Flight	290
	Nordika Desgagnes	10-Jul-23	Razorbill	2	Water	No	D	Rafting	285
	Nordika Desgagnes	19-Jul-23	Herring Gull	2	Fly	No	B	Other	70
	Nordika Desgagnes	19-Jul-23	Herring Gull	1	Fly	Yes	A	Other	60
	Nordika Desgagnes	19-Jul-23	Unknown Jaeger	2	Water	No	B	Other	-
	Nordika Desgagnes	19-Jul-23	Unknown Murre	3	Fly	Yes	B	Escape Flight	300
Nordika Desgagnes	19-Jul-23	Northern Fulmar	1	Fly	No	C	Other	245	
Nordika Desgagnes	19-Jul-23	Razorbill	1	Fly	No	B	Other	40	
Nordika Desgagnes	19-Jul-23	Herring Gull	1	Fly	No	A	Escape Flight	45	
Nordika Desgagnes	19-Jul-23	Unknown Jaeger	2	Fly	Yes	B	Escape Flight	135	
Nordika Desgagnes	19-Jul-23	Razorbill	2	Fly	No	B	Other	275	
Nordika Desgagnes	19-Jul-23	Herring Gull	1	Fly	Yes	A	Other	30	
Nordika Desgagnes	19-Jul-23	Unknown Murre	1	Fly	Yes	B	Other	300	
Nordika Desgagnes	19-Jul-23	Unknown Murre	1	Fly	No	B	Other	0	
Nordika Desgagnes	19-Jul-23	Northern Fulmar	2	Fly	No	A	Other	150	
Nordika Desgagnes	19-Jul-23	Herring Gull	1	Fly	No	B	Other	230	
Nordika Desgagnes	20-Jul-23	Unknown Bird	10	Fly	No	B	Other	-	
Nordika Desgagnes	20-Jul-23	Parasitic Jaeger	15	Fly	No	B	Escape Flight	100	
Nordika Desgagnes	20-Jul-23	Unknown Jaeger	7	Fly	No	B	Escape Flight	100	
Nordika Desgagnes	20-Jul-23	Unknown Jaeger	5	Fly	No	C	Escape Flight	107	
Nordika Desgagnes	20-Jul-23	Unknown Jaeger	5	Fly	No	B	Escape Flight	130	
Nordika Desgagnes	20-Jul-23	Unknown Jaeger	1	Fly	Yes	C	Escape Flight	200	
Nordika Desgagnes	20-Jul-23	Unknown Jaeger	4	Fly	Yes	C	Escape Flight	90	
Nordika Desgagnes	20-Jul-23	Unknown Jaeger	6	Fly	No	C	Escape Flight	90	
Coastal Shipping Ltd.	Kivalliq W.	5-Oct-23	Herring Gull	1	Fly	Yes	C	Other	300
	Kivalliq W.	5-Oct-23	Herring Gull	1	Fly	Yes	D	Escape Flight	88
	Kivalliq W.	6-Oct-23	Herring Gull	2	Water	No	D	Rafting	-
	Kivalliq W.	6-Oct-23	Herring Gull	1	Fly	Yes	B	Flying	270
	Kivalliq W.	6-Oct-23	Herring Gull	1	Water	No	C	Rafting	-
	Kivalliq W.	6-Oct-23	Herring Gull	2	Fly	Yes	B	Flying	270
	Kivalliq W.	6-Oct-23	Herring Gull	1	Water	No	C	Rafting	-
	Kivalliq W.	7-Oct-23	Herring Gull	2	Water	No	C	-	-
	Kivalliq W.	7-Oct-23	Herring Gull	1	Water	No	D	-	-
	Kivalliq W.	8-Oct-23	Herring Gull	1	Fly	Yes	B	Other	270
	Kivalliq W.	8-Oct-23	Herring Gull	2	Water	No	D	Rafting	-
	Kivalliq W.	8-Oct-23	Cackling/Canada Goose	6	Fly	Yes	D	Other	180
	Kivalliq W.	11-Oct-23	Herring Gull	1	Water	No	D	Rafting	-
	Kivalliq W.	11-Oct-23	Herring Gull	1	Water	No	D	Rafting	-
	Kivalliq W.	11-Oct-23	Herring Gull	1	Fly	Yes	C	Escape Flight	200
Kivalliq W.	12-Oct-23	Herring Gull	1	Fly	Yes	B	Flying	90	
Kivalliq W.	12-Oct-23	Herring Gull	1	Water	No	A	Rafting	-	



APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction	
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	12-Oct-23	Herring Gull	2	Fly	Yes	B	Flying	180	
	Kivalliq W.	12-Oct-23	Herring Gull	1	Fly	Yes	C	Flying	-	
	Kivalliq W.	13-Oct-23	Herring Gull	1	Water	No	A	Escape Flight	-	
	Kivalliq W.	14-Oct-23	Herring Gull	1	Fly	Yes	A	Escape Flight	200	
	Kivalliq W.	16-Oct-23	Cackling/Canada Goose	12	Fly	Yes	D	Escape Flight	135	
	Kivalliq W.	16-Oct-23	Herring Gull	3	Water	No	C	Rafting	-	
	Kivalliq W.	16-Oct-23	Herring Gull	4	Fly	Yes	C	Escape Flight	300	
	Kivalliq W.	17-Oct-23	Herring Gull	2	Fly	Yes	C	Escape Flight	0	
	Kivalliq W.	17-Oct-23	Herring Gull	2	Water	No	C	-	-	
	Kivalliq W.	17-Oct-23	Herring Gull	2	Water	No	B	-	-	
	Kivalliq W.	19-Oct-23	Herring Gull	2	Fly	Yes	C	Escape Flight	270	
	Kivalliq W.	19-Oct-23	Herring Gull	2	Water	No	D	-	-	
	Kivalliq W.	22-Oct-23	Herring Gull	2	Water	No	B	Rafting	-	
	Kivalliq W.	22-Oct-23	Herring Gull	1	Fly	Yes	B	Escape Flight	180	
	Kivalliq W.	22-Oct-23	Herring Gull	1	Fly	Yes	A	Escape Flight	180	
	Kivalliq W.	22-Oct-23	Herring Gull	1	Water	No	B	Rafting	-	
	Kivalliq W.	22-Oct-23	Herring Gull	1	Fly	Yes	C	Escape Flight	180	
	Kivalliq W.	22-Oct-23	Herring Gull	2	Water	No	B	Rafting	-	
	Kivalliq W.	23-Oct-23	Herring Gull	3	Water	No	C	-	-	
	Kivalliq W.	23-Oct-23	Herring Gull	2	Fly	Yes	D	Escape Flight	225	
	Kivalliq W.	23-Oct-23	Herring Gull	1	Fly	Yes	C	Escape Flight	225	
	Tuvaq W.	10-Aug-23	Unknown Gull	2	Fly	Yes	A	Escape Flight	130	
	Tuvaq W.	13-Aug-23	Unknown Gull	1	Fly	Yes	E	Other	180	
	Tuvaq W.	13-Aug-23	Unknown Gull	1	Fly	Yes	E	Other	340	
	Tuvaq W.	13-Aug-23	Unknown Gull	2	Fly	Yes	E	Other	134	
	Tuvaq W.	13-Aug-23	Unknown Gull	2	Water	No	A	Other	-	
	Tuvaq W.	15-Aug-23	Unknown Bird	5	Fly	Yes	E	Escape Flight	253	
	Tuvaq W.	15-Aug-23	Unknown Gull	1	Land	Yes	B	Other	-	
	Tuvaq W.	15-Aug-23	Unknown Gull	12	Land	Yes	C	Other	-	
	Tuvaq W.	15-Aug-23	Bald Eagle	1	Land	Yes	C	Other	-	
	Tuvaq W.	15-Aug-23	Unknown Gull	1	Fly	Yes	A	Escape Flight	320	
	Tuvaq W.	15-Aug-23	Unknown Bird	3	Fly	Yes	A	Escape Flight	355	
	Tuvaq W.	16-Aug-23	Herring Gull	2	Water	No	B	Other	-	
	Tuvaq W.	16-Aug-23	Great Skua	1	Fly	No	C	Escape Flight	275	
	Tuvaq W.	16-Aug-23	Herring Gull	1	Water	Yes	C	Other	-	
	Tuvaq W.	17-Aug-23	Iceland Gull	1	Fly	Yes	C	Escape Flight	-	
	Tuvaq W.	17-Aug-23	Cackling/Canada Goose	4	Fly	Yes	B	Other	-	
	Tuvaq W.	17-Aug-23	Iceland Gull	3	Fly	No	C	Escape Flight	-	
	Tuvaq W.	17-Aug-23	Iceland Gull	3	Fly	Yes	B	Escape Flight	260	
	Nordika	Nordika Desgagnes	7-Aug-23	Northern Fulmar	1	Fly	No	A	Escape Flight	310
		Nordika Desgagnes	8-Aug-23	Northern Fulmar	1	Fly	Yes	A	Escape Flight	330
		Nordika Desgagnes	8-Aug-23	Northern Fulmar	1	Fly	No	A	Escape Flight	300
		Nordika Desgagnes	8-Aug-23	Northern Fulmar	4	Fly	No	C	Escape Flight	290
Nordika Desgagnes		9-Aug-23	Herring Gull	2	Water	No	A	Other	-	
Nordika Desgagnes		9-Aug-23	Unknown Jaeger	3	Fly	No	B	Other	270	
Nordika Desgagnes		9-Aug-23	Northern Fulmar	2	Water	No	B	Other	-	
Nordika Desgagnes		9-Aug-23	Herring Gull	2	Fly	No	B	Other	100	
Nordika Desgagnes		10-Aug-23	Herring Gull	1	Fly	No	A	Other	100	
Nordika Desgagnes		10-Aug-23	Unknown Jaeger	2	Water	No	A	Other	-	
Nordika Desgagnes		10-Aug-23	Herring Gull	1	Fly	Yes	B	Other	210	
Nordika Desgagnes		11-Aug-23	Herring Gull	3	Fly	Yes	C	Other	140	
Nordika Desgagnes		11-Aug-23	Northern Fulmar	1	Water	No	A	Other	-	
Nordika Desgagnes		13-Aug-23	Herring Gull	2	Fly	No	B	Other	220	
Nordika Desgagnes		13-Aug-23	Unknown Jaeger	1	Water	No	A	Other	-	
Nordika Desgagnes		13-Aug-23	Northern Fulmar	3	Water	No	A	Other	-	
Nordika Desgagnes		13-Aug-23	Unknown Duck	5	Fly	Yes	C	Other	310	
Nordika Desgagnes		14-Aug-23	Unknown Duck	10	Fly	Yes	C	Other	160	
Nordika Desgagnes		14-Aug-23	Herring Gull	1	Water	No	A	Other	-	
Nordika Desgagnes		14-Aug-23	Greater Scaup	2	Water	No	B	-	-	
Nordika Desgagnes		14-Aug-23	Northern Fulmar	2	Fly	Yes	C	Other	80	
Nordika Desgagnes		14-Aug-23	Herring Gull	1	Fly	No	A	-	120	
Nordika Desgagnes		15-Aug-23	Herring Gull	1	Fly	Yes	A	Other	140	
Nordika Desgagnes		15-Aug-23	Unknown Duck	3	Fly	No	B	-	100	
Nordika Desgagnes		15-Aug-23	Herring Gull	2	Fly	Yes	A	-	240	
Nordika Desgagnes		16-Aug-23	Herring Gull	1	Fly	Yes	D	-	110	
Nordika Desgagnes		16-Aug-23	Unknown Duck	2	Fly	Yes	D	-	310	
Desgagnes		Nordika Desgagnes	17-Aug-23	Northern Fulmar	1	Fly	No	B	-	300
		Nordika Desgagnes	18-Aug-23	Unknown Duck	10	Fly	No	B	Other	230
		Nordika Desgagnes	18-Aug-23	Razorbill	1	Fly	No	C	Other	110
		Nordika Desgagnes	18-Aug-23	Herring Gull	3	Fly	Yes	A	Other	80
		Nordika Desgagnes	18-Aug-23	Northern Fulmar	1	Water	No	C	Other	-
		Nordika Desgagnes	18-Aug-23	Unknown Duck	3	Fly	No	D	-	20
		Nordika Desgagnes	20-Aug-23	Unknown Duck	10	Fly	Yes	D	Other	220
	Nordika Desgagnes	20-Aug-23	Herring Gull	2	Water	No	C	Other	-	
	Nordika Desgagnes	20-Aug-23	Razorbill	1	Fly	Yes	A	Other	300	
	Nordika Desgagnes	20-Aug-23	Northern Fulmar	2	Fly	No	A	Other	180	
	Nordika Desgagnes	21-Aug-23	Herring Gull	2	Fly	Yes	A	-	210	
	Nordika Desgagnes	21-Aug-23	Unknown Jaeger	1	Fly	No	C	Other	160	
	Nordika Desgagnes	22-Aug-23	Herring Gull	3	Fly	No	B	-	120	
	Nordika Desgagnes	22-Aug-23	Unknown Duck	5	Fly	Yes	D	-	240	
	Nordika Desgagnes	23-Aug-23	Herring Gull	2	Fly	Yes	B	Other	200	
	Nordika Desgagnes	23-Aug-23	Razorbill	1	Fly	No	B	Other	280	
	Nordika Desgagnes	23-Aug-23	Unknown Murre	1	Water	No	A	Other	-	
	Nordika Desgagnes	23-Aug-23	Herring Gull	1	Fly	No	B	Other	200	
	Nordika Desgagnes	24-Aug-23	Unknown Duck	10	Fly	Yes	B	-	100	
	Nordika Desgagnes	24-Aug-23	Herring Gull	1	Fly	No	A	-	180	
	Nordika Desgagnes	25-Aug-23	Herring Gull	1	Fly	No	B	Other	80	
	Nordika Desgagnes	25-Aug-23	Northern Fulmar	1	Fly	Yes	A	Other	32	
	Nordika Desgagnes	25-Aug-23	Northern Fulmar	2	Fly	No	A	Other	140	
	Nordika Desgagnes	25-Aug-23	Herring Gull	5	Water	No	C	Other	-	
	Nordika Desgagnes	25-Aug-23	Northern Fulmar	2	Fly	No	C	Other	100	
	Nordika Desgagnes	25-Aug-23	Unknown Jaeger	1	Fly	Yes	A	Other	140	
	Nordika Desgagnes	25-Aug-23	Herring Gull	2	Fly	No	A	Other	32	
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	15	Fly	No	A	Escape Flight	-	

APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction
Desgagnes (cont'd)	Nordika Desgagnes	11-Sep-23	Unknown Bird	20	Fly	No	E	Other	120
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	10	Fly	No	B	Flying	292
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	5	Fly	No	D	Other	280
	Nordika Desgagnes	11-Sep-23	Unknown Jaeger	3	Fly	No	B	Escape Flight	-
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	10	Fly	No	A	Escape Flight	-
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	3	Fly	No	A	Escape Flight	-
	Nordika Desgagnes	11-Sep-23	Unknown Jaeger	3	Fly	No	B	Escape Flight	-
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	7	Fly	No	A	Escape Flight	-
	Nordika Desgagnes	11-Sep-23	Northern Fulmar	10	Fly	No	D	Escape Flight	280
	Nordika Desgagnes	12-Sep-23	Northern Fulmar	1	Fly	Yes	A	Escape Flight	330
	Nordika Desgagnes	13-Sep-23	Northern Fulmar	1	Fly	Yes	B	Escape Flight	205
	Nordika Desgagnes	14-Sep-23	Herring Gull	2	Fly	No	B	Other	320
	Nordika Desgagnes	14-Sep-23	Northern Fulmar	3	Fly	No	C	Other	210
	Nordika Desgagnes	15-Sep-23	Unknown Duck	5	Fly	No	B	Other	250
	Nordika Desgagnes	15-Sep-23	Herring Gull	1	Water	No	A	-	-
	Nordika Desgagnes	16-Sep-23	Herring Gull	1	Fly	No	A	Other	300
	Nordika Desgagnes	16-Sep-23	Unknown Duck	10	Fly	Yes	C	Flying	220
	Nordika Desgagnes	16-Sep-23	Northern Fulmar	2	Fly	No	B	Other	80
	Nordika Desgagnes	17-Sep-23	Herring Gull	2	Water	No	B	Other	-
	Nordika Desgagnes	17-Sep-23	Unknown Duck	5	Fly	No	D	Other	310
	Nordika Desgagnes	18-Sep-23	Northern Fulmar	2	Fly	No	B	Other	200
	Nordika Desgagnes	18-Sep-23	Unknown Duck	10	Fly	No	C	Flying	120
	Nordika Desgagnes	19-Sep-23	Unknown Duck	10	Fly	No	B	Flying	100
	Nordika Desgagnes	19-Sep-23	Herring Gull	1	Fly	Yes	A	Other	300
	Nordika Desgagnes	20-Sep-23	Unknown Duck	15	Fly	Yes	C	Other	240
	Nordika Desgagnes	20-Sep-23	Herring Gull	1	Fly	No	A	Other	-
	Nordika Desgagnes	20-Sep-23	Unknown Jaeger	1	Fly	No	B	Other	300
	Nordika Desgagnes	21-Sep-23	Unknown Duck	15	Fly	No	C	Other	160
	Nordika Desgagnes	21-Sep-23	Northern Fulmar	2	Fly	No	C	Other	330
	Nordika Desgagnes	22-Sep-23	Unknown Duck	10	fl	No	B	Other	200
	Nordika Desgagnes	22-Sep-23	Herring Gull	1	Fly	No	A	Other	100
	Nordika Desgagnes	22-Sep-23	Northern Fulmar	2	Fly	No	C	Other	330
	Nordika Desgagnes	23-Sep-23	Herring Gull	2	Fly	No	C	Other	300
	Nordika Desgagnes	23-Sep-23	Unknown Duck	5	Fly	Yes	C	Other	240
	Nordika Desgagnes	23-Sep-23	Herring Gull	1	Fly	No	C	Other	140
	Nordika Desgagnes	23-Sep-23	Unknown Duck	10	Fly	No	D	Other	60
	Nordika Desgagnes	11-Oct-23	Glaucous Gull	2	Fly	Yes	A	Other	300
	Nordika Desgagnes	11-Oct-23	Herring Gull	2	Fly	Yes	-	Rafting	300
	Nordika Desgagnes	11-Oct-23	Northern Fulmar	1	Fly	Yes	A	Rafting	300
	Nordika Desgagnes	11-Oct-23	Razorbill	12	Fly	Yes	A	Escape Flight	0
	Nordika Desgagnes	11-Oct-23	Herring Gull	6	Fly	Yes	A	Rafting	300
	Nordika Desgagnes	11-Oct-23	Razorbill	1	Water	Yes	A	Rafting	300
	Nordika Desgagnes	11-Oct-23	Northern Fulmar	3	Fly	Yes	A	Rafting	300
	Nordika Desgagnes	11-Oct-23	Northern Fulmar	2	Fly	Yes	A	Rafting	210
	Nordika Desgagnes	11-Oct-23	Razorbill	1	Fly	Yes	A	Rafting	30
	Nordika Desgagnes	11-Oct-23	Glaucous Gull	2	Fly	Yes	A	Rafting	300
	Nordika Desgagnes	12-Oct-23	Razorbill	3	Water	Yes	C	Rafting	180
Nordika Desgagnes	12-Oct-23	Thick-billed Murre	5	Fly	Yes	D	Escape Flight	30	
Nordika Desgagnes	12-Oct-23	Glaucous Gull	10	Fly	Yes	B	Escape Flight	-	
Nordika Desgagnes	13-Oct-23	Northern Fulmar	2	Fly	Yes	C	Escape Flight	190	
Nordika Desgagnes	13-Oct-23	Razorbill	1	Fly	Yes	B	Escape Flight	10	
Nordika Desgagnes	13-Oct-23	Glaucous Gull	1	Fly	Yes	A	Rafting	283	
Nordika Desgagnes	13-Oct-23	Herring Gull	1	Fly	Yes	A	Rafting	283	
Nordika Desgagnes	15-Oct-23	Iceland Gull	1	Fly	Yes	B	Escape Flight	300	
Nordika Desgagnes	16-Oct-23	Northern Fulmar	2	Fly	No	A	Escape Flight	90	
Nordika Desgagnes	19-Oct-23	Northern Fulmar	5	Fly	No	A	Escape Flight	315	
Nordika Desgagnes	21-Oct-23	Northern Fulmar	18	Fly	Yes	A	Escape Flight	40	
Nordika Desgagnes	21-Oct-23	Razorbill	3	Fly	Yes	A	Escape Flight	180	
Nordika Desgagnes	21-Oct-23	Northern Fulmar	8	Fly	Yes	A	Rafting	103	
Nordika Desgagnes	21-Oct-23	Parasitic Jaeger	6	Fly	Yes	A	Escape Flight	180	
Nordika Desgagnes	21-Oct-23	Northern Fulmar	6	Fly	Yes	A	Escape Flight	180	
Nordika Desgagnes	23-Oct-23	Glaucous Gull	3	Fly	Yes	A	Escape Flight	125	
Nordika Desgagnes	23-Oct-23	Glaucous Gull	1	Fly	Yes	A	Escape Flight	35	
Nordika Desgagnes	23-Oct-23	Glaucous Gull	4	Fly	No	A	Escape Flight	125	
Nordika Desgagnes	23-Oct-23	Iceland Gull	1	Fly	Yes	A	Escape Flight	200	
Nordika Desgagnes	23-Oct-23	Herring Gull	1	Fly	Yes	A	Escape Flight	45	
Nordika Desgagnes	23-Oct-23	Glaucous Gull	1	Fly	No	B	Escape Flight	90	
Nordika Desgagnes	23-Oct-23	Herring Gull	2	Fly	Yes	A	Escape Flight	210	
Nordika Desgagnes	23-Oct-23	Glaucous Gull	2	Fly	Yes	A	Escape Flight	125	
Nordika Desgagnes	23-Oct-23	Unknown Bird	5	Fly	Yes	A	Escape Flight	200	
Nordika Desgagnes	23-Oct-23	Unknown Bird	3	Water	Yes	A	-	-	
Desgagnes Transarctik	Miena Desgagnes	13-Aug-23	Unknown Gull	1	Fly	Yes	B	Other	300
ATL	Atlantic Elm	14-Jul-23	Unknown Murre	1	Fly	-	A	Escape Flight	210
	Atlantic Elm	14-Jul-23	Unknown Murre	2	Water	-	A	Rafting	-
	Atlantic Elm	14-Jul-23	Unknown Murre	3	Fly	-	A	Escape Flight	200
	Atlantic Elm	14-Jul-23	Unknown Murre	3	Fly	-	A	Escape Flight	220
	Atlantic Elm	14-Jul-23	Unknown Murre	1	Fly	-	A	Escape Flight	190
	Atlantic Elm	13-Jul-23	Unknown Murre	2	Water	No	A	Rafting	340
	Atlantic Elm	13-Jul-23	Unknown Murre	5	Water	No	A	Rafting	300
	Atlantic Elm	13-Jul-23	Northern Fulmar	2	Fly	No	A	Escape Flight	270
	Atlantic Elm	13-Jul-23	Unknown Murre	2	Fly	No	A	Escape Flight	85
	Atlantic Elm	13-Jul-23	Unknown Murre	2	Water	No	A	Escape Flight	275
	Atlantic Elm	13-Jul-23	Unknown Murre	4	Water	No	A	Rafting	275
	Atlantic Elm	13-Jul-23	Unknown Murre	2	Water	No	A	Rafting	290
	Atlantic Elm	13-Jul-23	Unknown Murre	1	Water	No	A	Rafting	320
	Atlantic Elm	13-Jul-23	Unknown Murre	2	Fly	No	A	Escape Flight	90
	Coastal Shipping Ltd.	Kitikmeot	23-Jul-23	Northern Fulmar	2	Fly	Yes	E	Escape Flight
Kitikmeot		23-Jul-23	Northern Fulmar	2	Fly	Yes	E	Escape Flight	170
Kitikmeot		23-Jul-23	Parasitic Jaeger	2	Fly	Yes	E	Escape Flight	70
Kitikmeot		23-Jul-23	Black-legged Kittiwake	7	Fly	Yes	D	Escape Flight	220
Kitikmeot		23-Jul-23	Northern Fulmar	3	Fly	Yes	D	Escape Flight	140
Kitikmeot		23-Jul-23	Northern Fulmar	2	Water	Yes	C	Rafting	-
Kitikmeot		23-Jul-23	Northern Fulmar	4	Fly	Yes	C	Escape Flight	230
Kitikmeot	23-Jul-23	Northern Fulmar	4	Water	Yes	E	Escape Flight	190	

APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction
Coastal Shipping Ltd. (cont'd)	Kitikmeot	23-Jul-23	Unknown Duck	1	Fly	Yes	D	Escape Flight	30
	Kitikmeot	23-Jul-23	Northern Fulmar	3	Water	Yes	C	Rafting	-
	Kitikmeot	23-Jul-23	Northern Fulmar	4	Water	Yes	D	Rafting	-
	Kitikmeot	23-Jul-23	Northern Fulmar	1	Fly	Yes	C	Escape Flight	130
	Kitikmeot	23-Jul-23	Northern Fulmar	3	Fly	Yes	D	Escape Flight	160
	Kitikmeot	23-Jul-23	Northern Fulmar	5	Water	Yes	D	Escape Flight	-
	Kitikmeot	23-Jul-23	Northern Fulmar	3	Fly	Yes	C	Escape Flight	235
	Kitikmeot	29-Jul-23	Unknown Gull	2	Fly	Yes	C	Escape Flight	90
	Kitikmeot	29-Jul-23	Unknown Duck	1	Water	Yes	D	Rafting	-
	Kitikmeot	29-Jul-23	Unknown Gull	2	Fly	Yes	C	Escape Flight	270
	Kitikmeot	30-Jul-23	Unknown Gull	1	Water	Yes	D	Rafting	-
	Kitikmeot	30-Jul-23	Unknown Duck	2	Water	Yes	D	Rafting	-
	Kitikmeot	30-Jul-23	Unknown Duck	1	Fly	Yes	C	Escape Flight	270
	Kitikmeot	31-Jul-23	Unknown Murre	5	Water	Yes	C	Rafting	-
	Kitikmeot	1-Aug-23	Unknown Duck	1	Water	Yes	C	Rafting	-
	Kitikmeot	1-Aug-23	Unknown Duck	1	Water	Yes	C	Rafting	-
	Kitikmeot	1-Aug-23	Unknown Murre	1	Water	Yes	C	Rafting	-
	Kitikmeot	1-Aug-23	Unknown Gull	2	Fly	Yes	B	Escape Flight	90
	Kitikmeot	2-Aug-23	Unknown Gull	1	Fly	Yes	C	Escape Flight	90
	Kitikmeot	2-Aug-23	Unknown Duck	1	Water	Yes	C	Rafting	-
	Kitikmeot	3-Aug-23	Unknown Gull	1	Fly	Yes	C	Escape Flight	350
	Kitikmeot	4-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	135
	Kitikmeot	4-Aug-23	Unknown Murre	2	Fly	Yes	C	Escape Flight	300
	Kitikmeot	23-Jul-23	Unknown Duck	2	Fly	Yes	C	Escape Flight	160
	Kitikmeot	2-Aug-23	Unknown Murre	1	Water	Yes	D	Rafting	-
	Kitikmeot	4-Aug-23	Unknown Gull	1	Fly	Yes	B	Escape Flight	140
	Kitikmeot	4-Aug-23	Unknown Murre	1	Water	Yes	C	Rafting	-
	Kitikmeot	5-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	-
	Kitikmeot	5-Aug-23	Unknown Murre	5	Fly	Yes	D	Escape Flight	135
	Kitikmeot	5-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	90
	Kitikmeot	5-Aug-23	Unknown Murre	1	Fly	Yes	D	Escape Flight	220
	Kitikmeot	6-Aug-23	Unknown Gull	1	Water	Yes	B	Rafting	-
	Kitikmeot	8-Aug-23	Unknown Gull	2	Water	Yes	B	Rafting	-
	Kitikmeot	9-Aug-23	Unknown Gull	1	Fly	Yes	B	Escape Flight	0
	Kitikmeot	9-Aug-23	Unknown Murre	1	Fly	Yes	B	Escape Flight	60
	Kitikmeot	9-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	90
	Kitikmeot	9-Aug-23	Unknown Gull	1	Fly	Yes	B	Escape Flight	90
	Kitikmeot	9-Aug-23	Unknown Murre	2	Fly	Yes	C	Escape Flight	60
	Kitikmeot	9-Aug-23	Unknown Murre	1	Fly	Yes	D	Escape Flight	0
	Kitikmeot	10-Aug-23	Unknown Murre	2	Fly	Yes	B	Escape Flight	180
	Kitikmeot	10-Aug-23	Unknown Murre	8	Fly	Yes	B	Escape Flight	270
	Kitikmeot	10-Aug-23	Unknown Murre	2	-	Yes	B	Escape Flight	0
	Kitikmeot	10-Aug-23	Unknown Murre	2	-	Yes	C	Escape Flight	270
	Kitikmeot	10-Aug-23	Unknown Murre	1	-	Yes	C	Escape Flight	130
	Kitikmeot	10-Aug-23	Unknown Murre	1	-	Yes	D	Escape Flight	60
	Kitikmeot	10-Aug-23	Unknown Murre	1	-	Yes	B	Escape Flight	170
	Kitikmeot	10-Aug-23	Unknown Murre	1	-	Yes	C	Escape Flight	220
	Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	B	Escape Flight	200
	Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	B	Escape Flight	180
	Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	260
	Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	B	Escape Flight	180
	Kitikmeot	10-Aug-23	Unknown Murre	4	Fly	Yes	C	Escape Flight	200
	Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	50
	Kitikmeot	10-Aug-23	Unknown Murre	12	Fly	Yes	B	Escape Flight	90
	Kitikmeot	10-Aug-23	Unknown Murre	1	Water	Yes	B	Rafting	-
	Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	180
Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	B	Escape Flight	260	
Kitikmeot	10-Aug-23	Unknown Murre	2	Fly	Yes	D	Rafting	-	
Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	80	
Kitikmeot	10-Aug-23	Unknown Murre	2	Fly	Yes	C	Escape Flight	90	
Kitikmeot	10-Aug-23	Unknown Murre	3	Fly	Yes	A	Escape Flight	60	
Kitikmeot	10-Aug-23	Unknown Murre	1	Fly	Yes	B	Escape Flight	180	
Kitikmeot	11-Aug-23	Northern Fulmar	3	Fly	Yes	C	Escape Flight	90	
Kitikmeot	11-Aug-23	Northern Fulmar	2	Fly	Yes	B	Escape Flight	290	
Kitikmeot	11-Aug-23	Northern Fulmar	1	Fly	Yes	B	Escape Flight	90	
Kitikmeot	11-Aug-23	Unknown Murre	1	Fly	Yes	C	Escape Flight	180	
Kitikmeot	11-Aug-23	Northern Fulmar	1	Fly	Yes	B	Escape Flight	150	
Kitikmeot	11-Aug-23	Northern Fulmar	2	Fly	Yes	B	Escape Flight	290	
Kitikmeot	11-Aug-23	Northern Fulmar	1	Fly	Yes	C	Escape Flight	0	
Kitikmeot	11-Aug-23	Unknown Gull	1	Fly	Yes	C	Escape Flight	270	
Kitikmeot	11-Aug-23	Northern Fulmar	2	Fly	Yes	B	Escape Flight	30	
Kitikmeot	11-Aug-23	Northern Fulmar	2	Fly	Yes	C	Escape Flight	230	
Kitikmeot	11-Aug-23	Northern Fulmar	1	Fly	Yes	B	Escape Flight	90	
Kitikmeot	11-Aug-23	Northern Fulmar	1	Fly	Yes	B	Escape Flight	50	
Kivalliq W.	11-Aug-23	Herring Gull	1	Fly	Yes	B	Flying	25	
Kivalliq W.	11-Aug-23	Herring Gull	2	Fly	Yes	C	Flying	270	
Kivalliq W.	11-Aug-23	Herring Gull	1	Water	No	B	Rafting	-	
Kivalliq W.	11-Aug-23	Herring Gull	2	Fly	Yes	B	Flying	-	
Kivalliq W.	11-Aug-23	Cackling/Canada Goose	22	Fly	Yes	C	Flying	225	
Kivalliq W.	11-Aug-23	Herring Gull	2	Water	No	D	Rafting	-	
Kivalliq W.	11-Aug-23	Herring Gull	6	Fly	Yes	B	Flying	270	
Kivalliq W.	12-Aug-23	Herring Gull	3	Fly	Yes	A	Escape Flight	200	
Kivalliq W.	12-Aug-23	Herring Gull	2	Water	No	B	Rafting	-	
Kivalliq W.	12-Aug-23	Herring Gull	2	Water	No	B	Rafting	-	
Kivalliq W.	13-Aug-23	Unknown Duck	4	Water	No	D	Other	-	
Kivalliq W.	13-Aug-23	Herring Gull	3	Water	No	E	Rafting	-	
Kivalliq W.	13-Aug-23	Unknown Goose	2	-	No	B	Other	-	
Kivalliq W.	14-Aug-23	Herring Gull	3	Water	No	B	Rafting	-	
Kivalliq W.	14-Aug-23	Herring Gull	2	Fly	Yes	B	Escape Flight	122	
Kivalliq W.	15-Aug-23	Herring Gull	2	Fly	Yes	A	Other	324	
Kivalliq W.	15-Aug-23	Herring Gull	1	Water	No	C	Rafting	-	
Kivalliq W.	15-Aug-23	Herring Gull	1	Water	No	C	Rafting	-	
Kivalliq W.	15-Aug-23	Herring Gull	2	Fly	Yes	B	Other	143	
Kivalliq W.	15-Aug-23	Herring Gull	2	Water	No	A	Rafting	-	

APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	17-Aug-23	Snow Goose	36	Fly	Yes	E	Other	275
	Kivalliq W.	17-Aug-23	Herring Gull	4	Water	No	C	Rafting	-
	Kivalliq W.	17-Aug-23	Herring Gull	4	Fly	Yes	B	Flying	315
	Kivalliq W.	17-Aug-23	American Crow	3	Fly	Yes	B	Flying	212
	Kivalliq W.	17-Aug-23	Herring Gull	2	Water	No	C	Rafting	-
	Kivalliq W.	17-Aug-23	Herring Gull	4	Fly	Yes	B	Flying	180
	Kivalliq W.	17-Aug-23	Herring Gull	2	Water	Yes	D	Rafting	-
	Kivalliq W.	17-Aug-23	Cackling/Canada Goose	17	Fly	No	E	Other	225
	Kivalliq W.	19-Aug-23	Herring Gull	3	Water	No	C	Rafting	-
	Kivalliq W.	19-Aug-23	Herring Gull	2	Water	No	D	Rafting	-
	Kivalliq W.	19-Aug-23	Herring Gull	6	Fly	Yes	B	Flying	270
	Kivalliq W.	19-Aug-23	Cackling/Canada Goose	24	Fly	Yes	E	Flying	180
	Kivalliq W.	19-Aug-23	Herring Gull	7	Water	No	B	Rafting	-
	Kivalliq W.	19-Aug-23	Herring Gull	2	Fly	No	A	Flying	18
	Kivalliq W.	19-Aug-23	Herring Gull	1	Fly	Yes	B	Flying	135
	Kivalliq W.	20-Aug-23	Herring Gull	7	Fly	Yes	B	Escape Flight	185
	Kivalliq W.	20-Aug-23	Herring Gull	2	Water	No	A	Rafting	-
	Kivalliq W.	20-Aug-23	Herring Gull	2	Water	No	A	Rafting	-
	Kivalliq W.	21-Aug-23	Herring Gull	2	Fly	Yes	B	Flying	270
	Kivalliq W.	21-Aug-23	Herring Gull	4	Water	Yes	D	Rafting	-
	Kivalliq W.	21-Aug-23	Herring Gull	2	Water	No	B	Rafting	-
	Kivalliq W.	21-Aug-23	Snow Goose	6	Fly	Yes	E	Flying	-
	Kivalliq W.	21-Aug-23	Herring Gull	2	Water	No	C	Rafting	-
	Kivalliq W.	21-Aug-23	Snow Goose	14	Fly	Yes	E	Flying	135
	Kivalliq W.	21-Aug-23	Herring Gull	1	Fly	Yes	A	Flying	135
	Kivalliq W.	22-Aug-23	Herring Gull	3	Water	No	A	Rafting	-
	Kivalliq W.	22-Aug-23	Herring Gull	3	Water	No	A	Rafting	-
	Kivalliq W.	22-Aug-23	Herring Gull	3	Water	No	A	Rafting	-
	Kivalliq W.	22-Aug-23	Herring Gull	5	Fly	No	C	Escape Flight	270
	Kivalliq W.	24-Aug-23	Herring Gull	4	Water	No	C	Rafting	-
	Kivalliq W.	24-Aug-23	Herring Gull	4	Water	No	C	Rafting	-
	Kivalliq W.	25-Aug-23	Herring Gull	2	Fly	Yes	D	-	270
	Kivalliq W.	25-Aug-23	Herring Gull	1	Fly	Yes	D	-	270
	Kivalliq W.	25-Aug-23	Herring Gull	2	Fly	Yes	B	-	270
	Kivalliq W.	25-Aug-23	Herring Gull	3	Fly	Yes	B	-	270
	Kivalliq W.	26-Aug-23	Cackling/Canada Goose	12	Fly	Yes	B	Escape Flight	185
	Kivalliq W.	26-Aug-23	Herring Gull	5	Fly	No	C	Escape Flight	100
	Kivalliq W.	26-Aug-23	Herring Gull	2	y	No	A	Rafting	-
	Kivalliq W.	24-Aug-23	Herring Gull	2	Fly	No	A	Escape Flight	90
	Kivalliq W.	24-Aug-23	Herring Gull	4	Water	No	C	Rafting	-
	Kivalliq W.	24-Aug-23	Herring Gull	4	Water	No	C	Rafting	-
	Kivalliq W.	25-Aug-23	Herring Gull	2	Fly	Yes	D	-	270
	Kivalliq W.	25-Aug-23	Herring Gull	1	Fly	Yes	D	-	290
	Kivalliq W.	25-Aug-23	Herring Gull	2	Fly	Yes	B	-	270
	Kivalliq W.	25-Aug-23	Herring Gull	3	Fly	Yes	B	-	270
	Kivalliq W.	26-Aug-23	Cackling/Canada Goose	12	Fly	Yes	B	Escape Flight	185
	Kivalliq W.	26-Aug-23	Herring Gull	5	Fly	No	C	Escape Flight	100
	Kivalliq W.	26-Aug-23	Herring Gull	2	y	No	A	Rafting	-
	Kivalliq W.	27-Aug-23	Snow Goose	3	Fly	No	C	Escape Flight	270
	Kivalliq W.	27-Aug-23	Herring Gull	5	Water	No	C	Rafting	-
	Kivalliq W.	27-Aug-23	Herring Gull	3	Fly	No	B	Escape Flight	180
	Kivalliq W.	27-Aug-23	Herring Gull	2	Fly	No	A	Escape Flight	0
	Kivalliq W.	28-Aug-23	Herring Gull	2	Fly	No	A	Escape Flight	120
	Kivalliq W.	28-Aug-23	Herring Gull	4	Water	No	B	Rafting	-
	Kivalliq W.	29-Aug-23	Herring Gull	4	Fly	Yes	D	Escape Flight	270
	Kivalliq W.	29-Aug-23	Herring Gull	4	Water	No	C	Rafting	-
Kivalliq W.	29-Aug-23	Herring Gull	3	Water	No	B	Rafting	-	
Kivalliq W.	29-Aug-23	Cackling/Canada Goose	27	Fly	Yes	E	-	270	
Kivalliq W.	29-Aug-23	Herring Gull	1	Fly	Yes	B	-	135	
Kivalliq W.	29-Aug-23	Herring Gull	2	Water	No	C	Rafting	-	
Kivalliq W.	29-Aug-23	Herring Gull	1	Fly	Yes	B	-	270	
Kivalliq W.	29-Aug-23	Snow Goose	56	Fly	Yes	E	-	180	
Kivalliq W.	30-Aug-23	Cackling/Canada Goose	13	Fly	Yes	C	Escape Flight	170	
Kivalliq W.	30-Aug-23	Cackling/Canada Goose	7	Fly	Yes	D	Escape Flight	175	
Kivalliq W.	30-Aug-23	Herring Gull	3	Water	No	B	Rafting	-	
Kivalliq W.	30-Aug-23	Herring Gull	7	Fly	No	C	Escape Flight	275	
Kivalliq W.	30-Aug-23	Snow Goose	2	Fly	No	B	Escape Flight	200	
Kivalliq W.	31-Aug-23	Herring Gull	6	Water	No	A	Rafting	-	
Kivalliq W.	31-Aug-23	Herring Gull	6	Water	No	A	Rafting	-	
Kivalliq W.	31-Aug-23	Herring Gull	3	Fly	Yes	C	Escape Flight	120	
Kivalliq W.	30-Jul-23	Unknown Gull	3	Water	No	E	Rafting	0	
Kivalliq W.	30-Jul-23	Herring Gull	1	Fly	Yes	C	-	135	
Kivalliq W.	30-Jul-23	Herring Gull	1	Water	No	D	Rafting	-	
Kivalliq W.	30-Jul-23	Herring Gull	1	Water	No	D	Rafting	-	
Kivalliq W.	30-Jul-23	Unknown Gull	1	Fly	Yes	E	-	0	
Kivalliq W.	30-Jul-23	Herring Gull	1	Fly	Yes	C	-	90	
Kivalliq W.	30-Jul-23	Herring Gull	1	Fly	Yes	C	-	270	
Kivalliq W.	1-Aug-23	Herring Gull	3	Water	No	C	Rafting	147	
Kivalliq W.	1-Aug-23	Unknown Goose	15	Fly	Yes	D	Other	252	
Kivalliq W.	1-Aug-23	Herring Gull	7	Water	No	B	Rafting	18	
Kivalliq W.	1-Aug-23	Unknown Duck	3	Fly	Yes	D	Other	173	
Kivalliq W.	3-Aug-23	Herring Gull	1	Water	No	C	Rafting	-	
Kivalliq W.	3-Aug-23	Herring Gull	3	Fly	Yes	B	Other	135	
Kivalliq W.	3-Aug-23	Herring Gull	1	Water	No	C	Rafting	-	
Kivalliq W.	3-Aug-23	Cackling/Canada Goose	14	Fly	Yes	D	Escape Flight	180	
Kivalliq W.	3-Aug-23	Herring Gull	2	Water	No	E	Rafting	-	
Kivalliq W.	5-Aug-23	Herring Gull	1	Water	No	B	Rafting	-	
Kivalliq W.	5-Aug-23	Herring Gull	1	Water	No	C	Rafting	-	
Kivalliq W.	5-Aug-23	Herring Gull	1	Fly	Yes	A	-	-	
Kivalliq W.	5-Aug-23	Cackling/Canada Goose	4	Fly	Yes	C	-	180	
Kivalliq W.	5-Aug-23	Herring Gull	10	Fly	Yes	D	-	90	
Kivalliq W.	5-Aug-23	Herring Gull	4	Water	No	C	Rafting	-	
Kivalliq W.	7-Aug-23	Herring Gull	2	Fly	Yes	B	-	135	
Kivalliq W.	7-Aug-23	Herring Gull	3	Water	No	B	Rafting	-	

APPENDIX F: SEABIRD OBSERVATION DATA, 2023

Company / Agency	Platform Name	Survey Date	Species	Count	Observation Type	In Transect?	Distance Category	Behaviour	Flight Direction
Coastal Shipping Ltd. (cont'd)	Kivalliq W.	7-Aug-23	Herring Gull	8	Fly	Yes	E	-	290
	Kivalliq W.	7-Aug-23	Herring Gull	2	Water	No	E	Rafting	-
	Kivalliq W.	7-Aug-23	Herring Gull	4	Fly	Yes	C	-	325
	Kivalliq W.	7-Aug-23	Herring Gull	2	Water	No	E	Rafting	-
	Kivalliq W.	9-Aug-23	Unknown Goose	7	Fly	Yes	E	Other	173
	Kivalliq W.	9-Aug-23	Herring Gull	4	Water	No	C	Other	-
	Kivalliq W.	9-Aug-23	Herring Gull	7	Fly	Yes	C	Other	243
	Kivalliq W.	9-Aug-23	Cackling/Canada Goose	11	Fly	Yes	C	Other	163
	Kivalliq W.	10-Aug-23	Herring Gull	5	Water	No	A	Rafting	-
Kivalliq W.	10-Aug-23	Herring Gull	1	Fly	No	A	Escape Flight	170	
Transport Desgagnes	Marcellin Desgagnes	1-Aug-23	Razorbill	10	Fly	Yes	B	Escape Flight	0
	Marcellin Desgagnes	1-Aug-23	Northern Fulmar	2	Fly	Yes	D	Escape Flight	90
	Marcellin Desgagnes	1-Aug-23	Razorbill	3	Water	Yes	-	Rafting	-
	Marcellin Desgagnes	1-Aug-23	Unknown Murre	2	Water	Yes	B	Other	-
	Marcellin Desgagnes	1-Aug-23	Unknown Murre	1	Water	Yes	A	Rafting	-
	Marcellin Desgagnes	1-Aug-23	Unknown Murre	4	Water	No	-	Rafting	-
	Marcellin Desgagnes	1-Aug-23	Razorbill	2	Fly	Yes	D	Escape Flight	90
	Marcellin Desgagnes	1-Aug-23	Razorbill	1	Water	Yes	C	-	-
	Marcellin Desgagnes	1-Aug-23	Razorbill	5	Water	Yes	-	Rafting	-
	Marcellin Desgagnes	1-Aug-23	Pomarine Jaeger	10	Fly	Yes	A	Escape Flight	0
	Marcellin Desgagnes	1-Aug-23	Common Murre	2	Water	Yes	D	Rafting	-
	Marcellin Desgagnes	1-Aug-23	Unknown Murre	5	Fly	Yes	D	Escape Flight	90
	Marcellin Desgagnes	1-Aug-23	Unknown Jaeger	2	Fly	Yes	B	Escape Flight	0
	Marcellin Desgagnes	1-Aug-23	Unknown Murre	10	Fly	Yes	D	Escape Flight	90
	Marcellin Desgagnes	1-Aug-23	Dovekie	2	Fly	Yes	A	Escape Flight	45
	Marcellin Desgagnes	1-Aug-23	Razorbill	4	Fly	Yes	B	Escape Flight	45
	Marcellin Desgagnes	1-Aug-23	Unknown Bird	4	Fly	Yes	-	Escape Flight	270
	Marcellin Desgagnes	1-Aug-23	Unknown Murre	3	Fly	Yes	D	Escape Flight	180
	Marcellin Desgagnes	1-Aug-23	Dovekie	4	Fly	Yes	B	Escape Flight	90
	Marcellin Desgagnes	2-Aug-23	Unknown Gull	2	Fly	Yes	B	Escape Flight	-
	Marcellin Desgagnes	2-Aug-23	Unknown Bird	4	Fly	Yes	A	Escape Flight	90
	Marcellin Desgagnes	2-Aug-23	Northern Fulmar	2	Fly	Yes	B	Escape Flight	270
	Marcellin Desgagnes	2-Aug-23	Herring Gull	12	Fly	Yes	A	Escape Flight	90
	Marcellin Desgagnes	2-Aug-23	Unknown Bird	6	Fly	Yes	A	Escape Flight	90
	Marcellin Desgagnes	2-Aug-23	Unknown Bird	3	Fly	Yes	A	Escape Flight	90
	Marcellin Desgagnes	31-Jul-23	Unknown Gull	1	Fly	Yes	-	Escape Flight	130
	Marcellin Desgagnes	17-Jul-23	Unknown Gull	1	Fly	Yes	E	Escape Flight	40
	Marcellin Desgagnes	17-Jul-23	Dovekie	1	Fly	Yes	A	Escape Flight	-
	Marcellin Desgagnes	17-Jul-23	Thick-billed Murre	2	Water	-	B	Rafting	-
	Marcellin Desgagnes	17-Jul-23	Unknown Bird	10	Fly	-	-	Escape Flight	270
	Marcellin Desgagnes	17-Jul-23	Dovekie	1	Fly	Yes	A	Escape Flight	270
	Marcellin Desgagnes	17-Jul-23	Dovekie	2	Fly	Yes	A	Other	180
	Marcellin Desgagnes	20-Jul-23	Black-legged Kittiwake	1	Fly	Yes	A	Escape Flight	315
	Marcellin Desgagnes	20-Jul-23	Unknown Bird	1	Fly	Yes	D	Flying	270
	Marcellin Desgagnes	18-Aug-23	Northern Fulmar	2	Fly	Yes	A	Escape Flight	90
	Marcellin Desgagnes	19-Aug-23	Herring Gull	1	Fly	Yes	C	Escape Flight	90
	Marcellin Desgagnes	19-Aug-23	Unknown Bird	2	Fly	Yes	B	Escape Flight	90
	Marcellin Desgagnes	20-Aug-23	Unknown Bird	1	Fly	Yes	D	Escape Flight	90
	Marcellin Desgagnes	31-Aug-23	Leach's Storm-petrel	1	Fly	Yes	A	Escape Flight	-
	Marcellin Desgagnes	1-Sep-23	Unknown Jaeger	6	Fly	Yes	D	Escape Flight	-
Marcellin Desgagnes	1-Sep-23	Unknown Jaeger	6	Fly	Yes	D	Escape Flight	-	
Marcellin Desgagnes	1-Sep-23	Unknown Bird	30	Fly	-	-	Escape Flight	90	
Marcellin Desgagnes	1-Sep-23	Unknown Jaeger	20	Fly	Yes	E	Escape Flight	90	
Marcellin Desgagnes	1-Sep-23	Northern Fulmar	1	Fly	Yes	E	Escape Flight	90	
Marcellin Desgagnes	22-Sep-23	Unknown Bird	2	Fly	Yes	A	Escape Flight	270	
Marcellin Desgagnes	1-Oct-23	Northern Fulmar	1	Fly	Yes	A	Escape Flight	270	
Coastal Shipping Ltd.	Kitikmeot	1-Aug-23	Unknown Duck	3	Water	Yes	C	Rafting	-
	Kivalliq W.	24-Aug-23	Herring Gull	2	Fly	No	A	Escape Flight	90
	Kivalliq W.	1-Aug-23	Herring Gull	4	Water	No	B	Rafting	-
	Kivalliq W.	14-Aug-23	Herring Gull	5	Fly	Yes	A	Other	275
Transport Desgagnes	Marcellin Desgagnes	18-Aug-23	Northern Fulmar	2	Fly	Yes	B	Escape Flight	270
	Marcellin Desgagnes	20-Sep-23	Unknown Bird	1	Fly	Yes	B	Escape Flight	45
	Marcellin Desgagnes	30-Sep-23	Unknown Bird	1	Fly	Yes	A	Escape Flight	38
	Marcellin Desgagnes	30-Sep-23	Dovekie	2	Fly	Yes	A	Escape Flight	86
	Marcellin Desgagnes	1-Oct-23	Dovekie	1	Fly	Yes	A	Escape Flight	270
	Marcellin Desgagnes	19-Sep-23	Black-legged Kittiwake	1	Fly	Yes	B	Escape Flight	230
Coastal Shipping Ltd.	Kitikmeot	23-Jul-23	Surf Scoter	6	Water	Yes	E	Rafting	90
	Kitikmeot	23-Jul-23	Red Phalarope	2	Water	Yes	E	Escape Flight	130
Transport Desgagnes	Marcellin Desgagnes	19-Sep-23	Black-legged Kittiwake	1	Fly	Yes	B	Escape Flight	225
Desgagnes Transarctik	Miena Desgagnes	9-Aug-23	Herring Gull	1	Fly	No	D	-	0

# APPENDIX G SEABIRD DISTANCE ANALYSIS: TOP THREE AIC-RATED DISTANCE MODELS, MOVING VESSEL SURVEYS

**APPENDIX G: SEABIRD DISTANCE ANALYSIS – TOP THREE AIC-RATED DISTANCE MODELS, MOVING VESSEL SURVEYS**

<b>Year</b>	<b>Model Key and Adjustment</b>	<b>Detection Estimate</b>	<b>Detection SE<sup>1</sup></b>	<b>Δ AIC<sup>2</sup></b>
All Years	Hazard-rate	0.500	0.026	0
	Uniform with cosine adjustment	0.463	0.021	8.670
	Half-normal	0.500	0.017	12.600
2019	Hazard-rate with cosine adjustment	0.426	0.056	0.000
	Half-normal with cosine adjustment	0.467	0.041	4.762
	Hazard-rate, no adjustment	0.418	0.072	12.705
2020	Hazard-rate with cosine adjustment	0.337	0.033	0.000
	Half-normal with cosine adjustment	0.321	0.031	1.093
	Hazard-rate, no adjustment	0.356	0.046	2.839
2021	Hazard-rate, no adjustment	0.425	0.021	0.000
	Half-normal with cosine adjustment	0.416	0.031	2.072
	Uniform with cosine adjustment	0.405	0.016	2.461
2022	Hazard-rate with cosine adjustment*	0.500	0.257	0.000
	Hazard-rate with polynomial adjustment*	0.500	0.257	0.000
	Hazard-rate with no adjustment*	0.500	0.257	0.000
2023	Half-normal with cosine adjustment	0.378	0.023	0.000
	Hazard-rate with cosine adjustment*	0.400	0.037	1.004
	Hazard-rate with hermite adjustment*	0.400	0.037	1.004

Notes:

<sup>1</sup> Standard Error (SE)

<sup>2</sup> Akaike's Information Criteria (AIC), presented as the relative difference in ranking model fit. The lowest value in the best fit model.

\* The top three models in 2023 were all hazard-rate models with differing adjustments terms. These models all shared detection estimate and AIC value.



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Indonesia	Taiwan
Ireland	Tanzania
Italy	Thailand
Japan	UAE
Kazakhstan	UK
Kenya	US
Malaysia	Vietnam
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Mozambique	

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