

## Appendix 31 : 2020 Marine Mammal and Seabird Report



## Meadowbank and Meliadine Projects

Marine Mammal and Seabird Annual Report,  
2020

March 2021

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## Signature Page

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# Meadowbank and Meliadine Projects

Marine Mammal and Seabird Annual Report, 2020

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## EXECUTIVE SUMMARY

Agnico Eagle Mines Limited (Agnico Eagle) operates two mines in eastern Nunavut; the Meadowbank Complex (Meadowbank and Whale Tail Projects) approximately 85 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 equipment, supplies, and 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).

Agnico Eagle requested that ERM Consultants Canada Ltd. (ERM) update the training provided to vessel crews on avoidance of sensitive areas for marine wildlife and on survey protocols for conducting the MMSO surveys, and to produce the MMSO compliance report. The objective of this report is to present a summary of the MMSO data collected by Groupe Desgagnés during the 2020 MMSO program to support Agnico Eagle's 2020 annual report to NIRB. Results from the previous years for Meliadine (2017 to 2019) and Meadowbank (2018 to 2019) are also provided as a comparison between years.

During 2020, ERM provided updated training materials for vessel crew that were delivered by Agnico Eagle to all Groupe Desgagnés captains and bridge crew on vessels supplying Meadowbank and Meliadine. These training materials included updated instructions for vessel crew on: 1) setbacks from sensitive marine wildlife habitats such as marine mammal haul-outs and seabird colonies, and 2) mitigation procedures should marine mammals or seabirds be observed in or near the vessel path. Updated training materials were also supplied to dedicated MMSO crew observers including detailed methods for marine mammal and seabird surveys (on moving vessels and stationary vessels), data sheets, and training videos.

The 2020 MMSO program resulted in greater survey effort compared to previous years. A total of 25 Groupe Desgagnés vessels serviced the Projects between July and October during the 2020 shipping season: four for Meadowbank, six for Meliadine, and 15 serviced both Meadowbank and Meliadine. Datasheets were obtained from 19 of the 25 vessels in 2020, which was greater than in 2019 when only six vessels provided datasheets, and in 2018 which had only two participating vessels. All raw datasheets filled in by the MMSOs in 2020 are provided in Appendix D.

### *Setbacks from Sensitive Habitats*

In compliance with Whale Tail Project 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. 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 had several occasions where tracks appeared to intersect with 500 m setback polygons. However, in all cases no ship track point was located within a setback polygon. 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. Additional effort will be made in 2021 to ensure Groupe Desgagnés provides accurate track data to Agnico Eagle.



## Vessel Mitigation

Vessels are required to transit south of Coats Island whenever the weather is safe to do so. The majority of vessels servicing the Meadowbank and Meliadine projects in 2020 travelled south of Coats Island, with the exception of two occasions in September. Two vessels (*Nordika Desgagnés* and *Zéleda Desgagnés*) each had a single passage north of Coats Island in September 2020 because of safety issues associated with inclement weather, with tides up to 3 m and strong winds.

## Marine Mammal Monitoring

In 2020, 58 transects were surveyed for marine mammals, compared to less than 40 in previous years. There were 12 sightings (during surveys or incidentally) of marine mammals during the 2020 shipping season, compared to 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 2020 were recorded in the Eastern Hudson Strait or near Marble Island. There are 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 in 2020 or in previous years (2017, 2018, or 2019).

## Seabird Monitoring

No interactions between vessels and seabirds were recorded during the MMSO in 2020, or in previous years. Seabird survey effort on moving vessels has remained relatively consistent across all years (2018 to 2020). Over three years of moving vessel surveys for seabirds between 2018 and 2020, 48 species and 3,446 individual birds have been recorded across all years. The most common species recorded in 2020 was northern fulmar, followed by thick-billed murre. The same species were the most commonly recorded across all years, with the exception that snow goose was the most common overall, due to large numbers observed in 2019. Predicted seabird densities varied more, with the highest density predicted in 2019 (1.879 birds/ km<sup>2</sup>) and the lowest predicted in 2020 (0.701 birds/ km<sup>2</sup>). The variation in density estimates reflect the variability in overall detection rate between years, i.e., there were almost twice as many birds detected in 2019 than in 2020 despite greater spatial effort in 2020.

The majority of stationary seabird surveys were conducted in 2020, with five times the number of surveys conducted in 2020 compared to the previous two years combined. A total of 560 individual birds from 24 species were recorded during stationary vessel surveys in 2019 and 2020. Nearly 96% of records were from 2020 (n = 536 individuals). Detection estimates were much lower for stationary vessel surveys compared to moving vessel surveys (0.168 ± 0.022 for all years). This is consistent with the data, which indicate that both detections and number of birds recorded per survey were much 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. In 2020, 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 had their MMSOs record sightings of marine mammals and seabirds when possible while travelling on the barge. In 2020, four seabird survey transects were conducted in August by the dedicated MMSO while on board the barge. During the surveys, one harbor seal was recorded in August. In addition, four seabird surveys were conducted in 2020 on July 27, July 28, August 15, and August 18. Seventeen birds were observed, including seven herring gulls, three northern fulmars, two great cormorants, two black scoters, one pomarine jaeger, one glaucous gull, and one unknown gull.

**Table 1: Project Certificates, Conditions, Compliance, and Document Section**

Project Certificate and Condition #	Compliance	Section
<b>Meadowbank PC 004, Condition 36</b> Cumberland shall ensure the placement of local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet.	<b>In Compliance</b> Local area marine mammal monitors have conducted surveys aboard vessels transiting between Chesterfield Inlet and Baker Lake between 2008 and 2019. During 2020, due to COVID-19, local monitors could not board vessels and vessel crew conducted the monitoring.	1.6 Overview 3.4 Results
<b>Meadowbank PC 004, Condition 41</b> 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: a. Wildlife will be given right of way; b. Ships will maintain a straight course, constant speed, and will avoid erratic behaviour; and c. 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.	<b>In Compliance</b> During 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 for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut projects. Vessel tracks, where sufficient data are available, show vessels avoiding sensitive areas for marine wildlife.	1.3 Training 1.4 Mitigation 3.1 Results
<b>Meadowbank Whale Tail PC 008, Condition 38</b> 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.	<b>In Compliance</b> During 2020, Agnico Eagle emphasized the importance of routing south of Coats Island. As a result, captains were required to travel north of Coats Island on two occasions due to safety issues associated with inclement weather.	3.1 Results
<b>Meadowbank Whale Tail PC 008, Condition 39</b> The Proponent shall ensure that, subject to vessel safety requirements, a setback distance of at least 500 metres is maintained from colonies and aggregations of seabirds and marine mammals during Project shipping transiting through Hudson Strait, Hudson Bay, and Chesterfield Inlet.	<b>In Compliance</b> During 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 for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut projects. Vessel tracks, where sufficient data are available, show vessels avoiding sensitive areas for marine wildlife.	1.3 Training 1.4 Mitigation 3.1 Results

Project Certificate and Condition #	Compliance	Section
<p><b>Meadowbank 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>During 2020, Agnico Eagle updated the training materials for MMSO monitoring. These materials were presented to Groupe Desgagnés for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut projects. 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>During 2020, Agnico Eagle updated the training materials for MMSO monitoring. These materials were presented to Groupe Desgagnés for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut projects. 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>During 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 for distribution to all captains and bridge crew of vessels supplying Agnico Eagle Nunavut projects.</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>

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## ACRONYMS AND ABBREVIATIONS

AEM	Agnico Eagle Mines Limited
Agnico Eagle	Agnico Eagle Mines Limited
AIC	Akaike's Information Criterion
AIS	Automatic Identification System
CI	Confidence Interval
GPS	Global Positioning System
km	Kilometre
MMMMP	Marine Mammal Management and Monitoring Plan
MMSO	Marine Mammal and Seabird Observer
NIRB	Nunavut Impact Review Board
RSA	Regional Study Area
SMP	Shipping Management Plan
SOP	Standard Operating Procedure
VTs	Vessel Traffic Services



## 1. INTRODUCTION

### 1.1 Project Background

Agnico Eagle Mines Limited (Agnico Eagle) contracts the shipping company Groupe Desgagnés to ship equipment, supplies and 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. Groupe Desgagnés includes both Transport Desgagnés vessels, which transport cargo, and PetroNav vessels, which transport fuel. Groupe Desgagnés will be used throughout this report.

The Marine Mammal and Seabird Observer (MMSO) Annual Report summarizes results of the 2020 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 2019); 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 (AEM 2018a); and
- the Meliadine Shipping Management Plan (AEM 2018b).

During 2020, Agnico Eagle requested that ERM Consultants Canada Ltd. (ERM) improve the MMSO program 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 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;
- develop and present training workshops for MMSO observers; and
- produce the 2020 MMSO annual report for the two projects.

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

#### 1.1.1 Agnico Eagle Meadowbank Division

Agnico Eagle – Meadowbank Complex operates the Meadowbank and Whale Tail Projects. The Meadowbank Complex holds NIRB Project Certificates 004 and 008.

A total of approximately 60,000 tonnes of dry cargo and approximately 80 million litres of diesel fuel are required annually for the operations of the Project (Figure 1.1-1). 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 through the Baker Lake access passage (Chesterfield narrows, south channel) to the Meadowbank Mine barge unloading facilities and laydown area in Baker Lake.

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 NIRB Project Certificate No. 004, Term and Condition 36.

Whale Tail Project 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. The Meliadine Project holds NIRB Project Certificate 006.

A total of approximately 40,000 tonnes of dry cargo (equipment and supplies) and approximately 50 million litres of diesel fuel is required annually for the operations of the Meliadine Mine (Figure 1.1-1). To meet these needs, approximately eight vessels annually deliver dry goods and up to six tankers will annually deliver diesel fuel.

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:

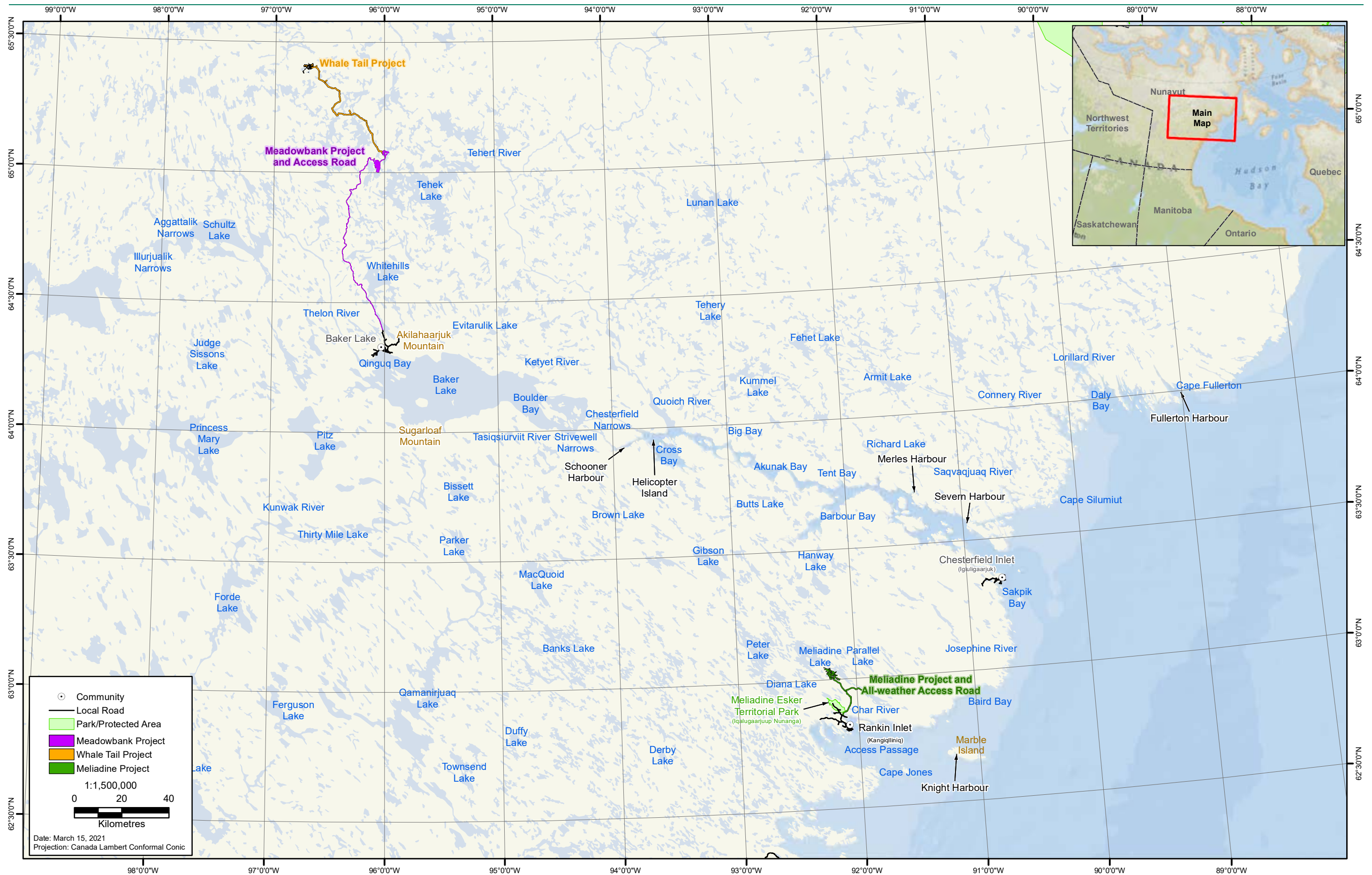
- training, mitigation, and monitoring required on vessels;
- the vessels that supplied Meadowbank Complex and Meliadine in 2020;
- mitigation measures conducted by these vessels, including setbacks from sensitive habitats, traveling south of Coats Island and avoiding marine mammals and seabirds observed at sea;
- marine mammal monitoring conducted from 2017 to 2020 (2017 was for Meliadine only);
- seabird monitoring conducted from 2018 to 2020; and
- community surveys conducted from barges between Helicopter Island in Chesterfield Inlet and the Hamlet of Baker Lake from 2008 and 2019, and conducted by Groupe Desgagnés in 2020 (due to restrictions related to Covid-19).

## 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; AEM 2018c) and Meliadine Marine Environmental Management Plan (MEMP; AEM 2018d) that is implemented by Project shipping contractors (AEM 2018a, 2018b). Groupe Desgagnés is 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.

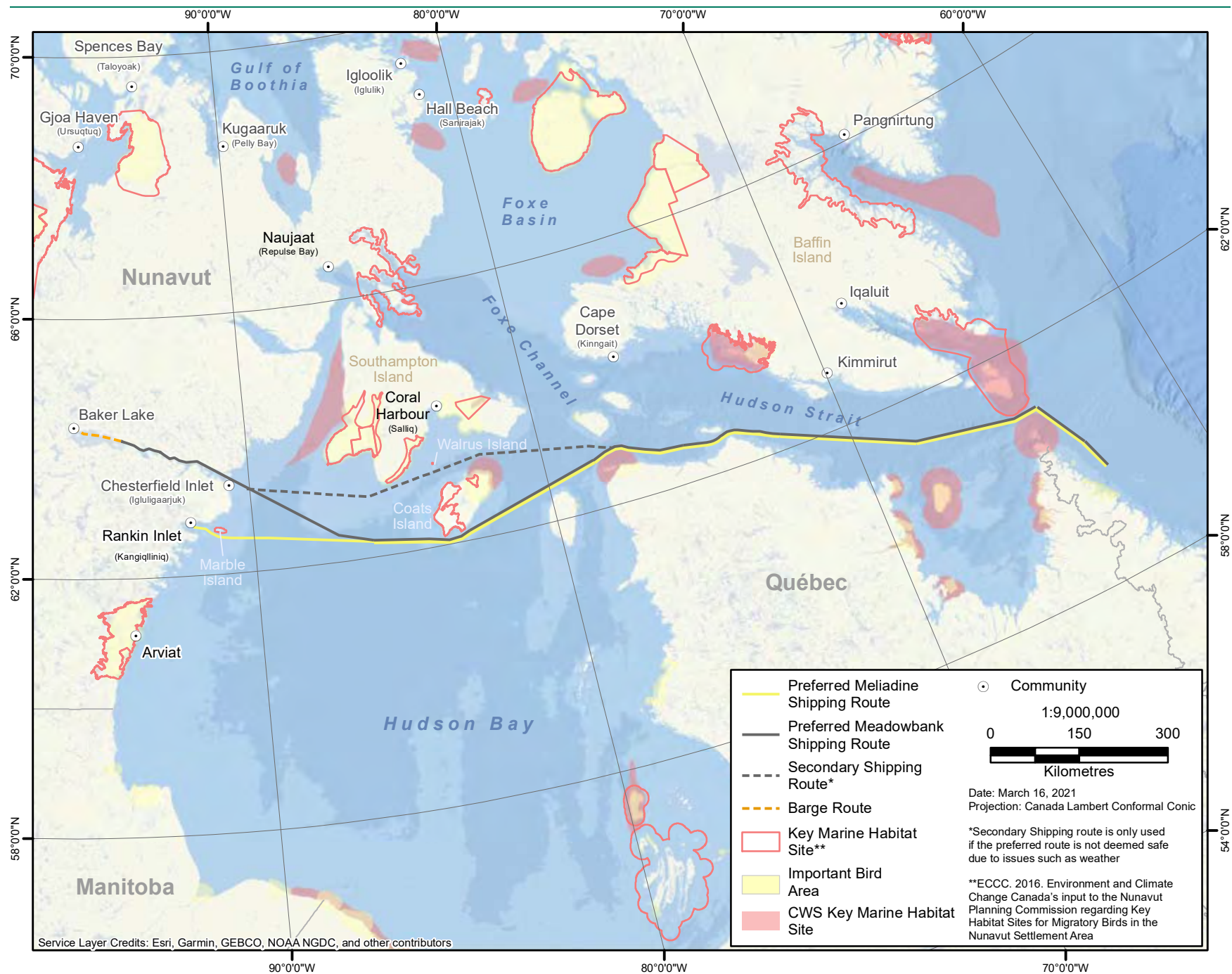
The objectives of the MMSO program are to:

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.



**Figure 1.1-1: Meliadine and Meadowbank Project Locations**





**Figure 1.1-2: Marine Mammal and Seabird Observer Program Study Area along Shipping Route**

As the MMSO related Terms and Conditions are similar between Nunavut Operations, the 2020 MMSO program is presented in one consolidated report. This report presents a summary of the MMSO data collected by Groupe Desgagnés on-board their vessels during the 2020 MMSO program to provide information to support Agnico Eagle's 2020 annual report to the NIRB. This report also includes a summary of all data collected between 2017 and 2020.

### 1.3 MMSO Training

Training provided by Agnico Eagle for the assigned MMSOs at Groupe Desgagnés was updated in 2020. 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 to be reviewed prior to beginning the MMSO duties. 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).
- 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).

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* were all updated in 2020 to improve data collection and simplify the process for the MMSOs on-board 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 projects 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; AEM 2018a, 2018b) 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 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
  - 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 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.

## 1.5 MMSO Monitoring at Sea

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 Bécancour to the project. The program includes collection of information on marine wildlife species presence along the shipping route. 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 equipment and fuel from Bécancour to Baker Lake, deep-water vessels can enter Chesterfield Inlet, but must stop at Helicopter Island 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 Division is required to engage a local area marine wildlife monitor on-board all vessels transporting fuel or materials for the Project on barge shipping between Helicopter Island and Baker Lake.

During 2020, due to the Covid-19 pandemic, Inuit observers were not allowed aboard vessels; therefore, marine wildlife observations were made by vessel crew when possible. Results of marine wildlife monitoring between Helicopter Island and Baker Lake are reported in Section 4.



## 2. METHODS

Groupe Desgagnés 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 (AEM 2018a, 2018b). These methods are summarized below and described in detail in Appendices B and C.

### 2.1 Vessel Tracks

Agnico Eagle provided 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 (2021) 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 2018a, 2018b), to establish setback polygons. GIS then performed 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 conducted while the vessels were traveling to Agnico Eagle projects. Surveys are conducted 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 conducted daily and are conducted at the same location on the vessel each time. Marine mammal surveys are conducted for a minimum of 1.5 hours to not more than two hours to mitigate observer fatigue and eyestrain. A precise scan routine is conducted throughout the marine mammal observation period as described in the MMMMP and the Marine Mammal Survey SOP (AEM 2018c; 2018d; Appendix B).

All marine mammals observed during the dedicated marine mammal survey periods are recorded on the “*Marine Mammal Sightings Form*”, 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 (AEM 2018c, 2018d).

#### 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. There were not enough marine mammal sightings recorded during the MMSO programs to conduct a density analysis.

### 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 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

Surveys from moving and stationary platforms were completed 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 conducted at the same location on the vessel as much as possible. Surveys 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 (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). This section summarizes the moving vessel surveys, as the majority of surveys are conducted while the vessel is moving. Additional information regarding the stationary vessel surveys can be found in Appendix C Section 2.4.4.

Each seabird survey period on a moving vessel is conducted 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 (AEM 2018c, 2018d; Appendix C). All birds observed within this 300 m transect, whether flying or on the water, are recorded and considered in-transect sightings. Binoculars are used to confirm species identification and other details when necessary. All seabirds observed during the dedicated observation periods are recorded including species, number of individuals, location (in flight or on water), distance to the vessel, and behaviour. Appendix C provides additional details regarding survey methods for seabirds.

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

Surveys from moving platforms were completed in five-minute intervals, while seabird surveys from stationary platforms are completed by conducting an instantaneous count (AEM 2018c, 2018d). The number of survey hours and kilometres 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 at the start and end of each five-minute 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.

### 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 1.0.2, run on R v 4.0.3; 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 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 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 Division is required to engage a local area marine wildlife monitor on-board all vessels transporting fuel or materials for the Project on barge shipping between Helicopter Island and Baker Lake. Local area marine wildlife observers are generally required to record all observations of wildlife as incidental sightings. However, in 2020, 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 had their MMSOs record sightings of marine mammals and seabirds when possible while travelling on the barge. In 2020, the MMSOs recorded marine mammal and seabird observations along transects, following methods described in Section 2.2 and 2.3.

### 3. RESULTS

#### 3.1 Shipping Activity in 2020

During the 2020 shipping season, a total of 25 vessels, two of which were tugs (15 cargo and 10 fuel) travelled to Meadowbank (four vessels), Meliadine (six vessels), or to both Meadowbank and Meliadine (15 vessels) between July 1 and October 20 (Table 3.1-1; Figure 3.1-1 through 3.1-4). Vessel tracks broadcast using Automated Information System (AIS) vessel positioning were downloaded from Vesseltracker (2021) and plotted using ArcGIS 10.8.1.

Most of these vessels delivered cargo and fuel exclusively for Agnico Eagle, while eight trips also conducted community re-supply before visiting Agnico Eagle projects, including the following:

- Three vessels in July (Tuvaq W., Dara Desgagnés, and Sedna Desgagnés; Figure 3.1-1);
- One vessel in August (Zélada Desgagnés; Figure 3.1-2);
- Two vessels in September (Nordika Desgagnés and Tuvaq W.; Figure 3.1-3); and
- Two vessels in October (Maria Degagnés and Sedna Desgagnés; Figure 3.1-4).

**Table 3.1-1: Summary of Groupe Desgagnés Vessels during the Shipping Season, July to October 2020**

Vessel Name	Fuel or Cargo	Project and Number of Trips			Total Trips
		Meadowbank	Meliadine	Meadowbank and Meliadine	
Kivalliq 1	Fuel	-	-	1	1
Dara 1	Fuel	-	-	1	1
Tuvaq 1	Fuel	-	-	1	1
MR60 1*	Fuel	-	-	1	1
Dara 2	Fuel	-	-	1	1
Maria 2	Fuel	-	-	1	1
Sarah Desgagnés	Fuel	-	-	1	1
Torm Camilla	Fuel	-	-	1	1
Torm Loke	Fuel	-	-	2	2
Nordika Desgagnés	Cargo	-	1	2	3
Taiga Desgagnés	Cargo	-	2	-	2
Atlantic Elm Tug	Cargo	1	-	-	1
Atlantic Beech Tug	Cargo	1	-	-	1
Sedna Desgagnés	Cargo	-	2	1	3
Claude A. Desgagnés	Cargo	2	-	-	2
Zélada Desgagnés	Cargo	-	1	1	2
Miena Desgagnés	Cargo	-	-	1	1
<b>Total</b>		<b>4</b>	<b>6</b>	<b>15</b>	<b>25</b>

\* The dates and the International Maritime Organization number (IMO#) for the MR60 1 were not provided; therefore the track for this vessel is not presented on the maps.

### 3.1.1 Mitigation Measures – Setbacks from Sensitive Habitats

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, and a setback distance of 2 km from Marble Island. 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.

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 vessels tracks appeared to cross through 2 km setback polygons at Marble Island on 14 occasions, and at Coats Island on five occasions (Figures 3.1-1 through 3.1-4). However, while examining the data, it appears that the shipping track points do not have the resolution to illustrate ship location at a fine temporal scale.

In all cases where track lines appeared to intersect the setbacks, no location points received from the satellite AIS were located within the setback polygons. The closest ship track points to the Marble Island setback were recorded by the Taiga Desgagnés in July, 6 km from the Marble Island setback polygon, Claude A. Desgagnés in July, 7 km from the setback, and by the Miena Desgagnés in September, 8 km from the setback polygon. The closest ship track point to the Coats Island setback was recorded by the Taiga Desgagnés in July, 15 km from the setback polygon and by the Miena Desgagnés in September, 42 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.

### 3.1.2 Mitigation Measures – Coats Island

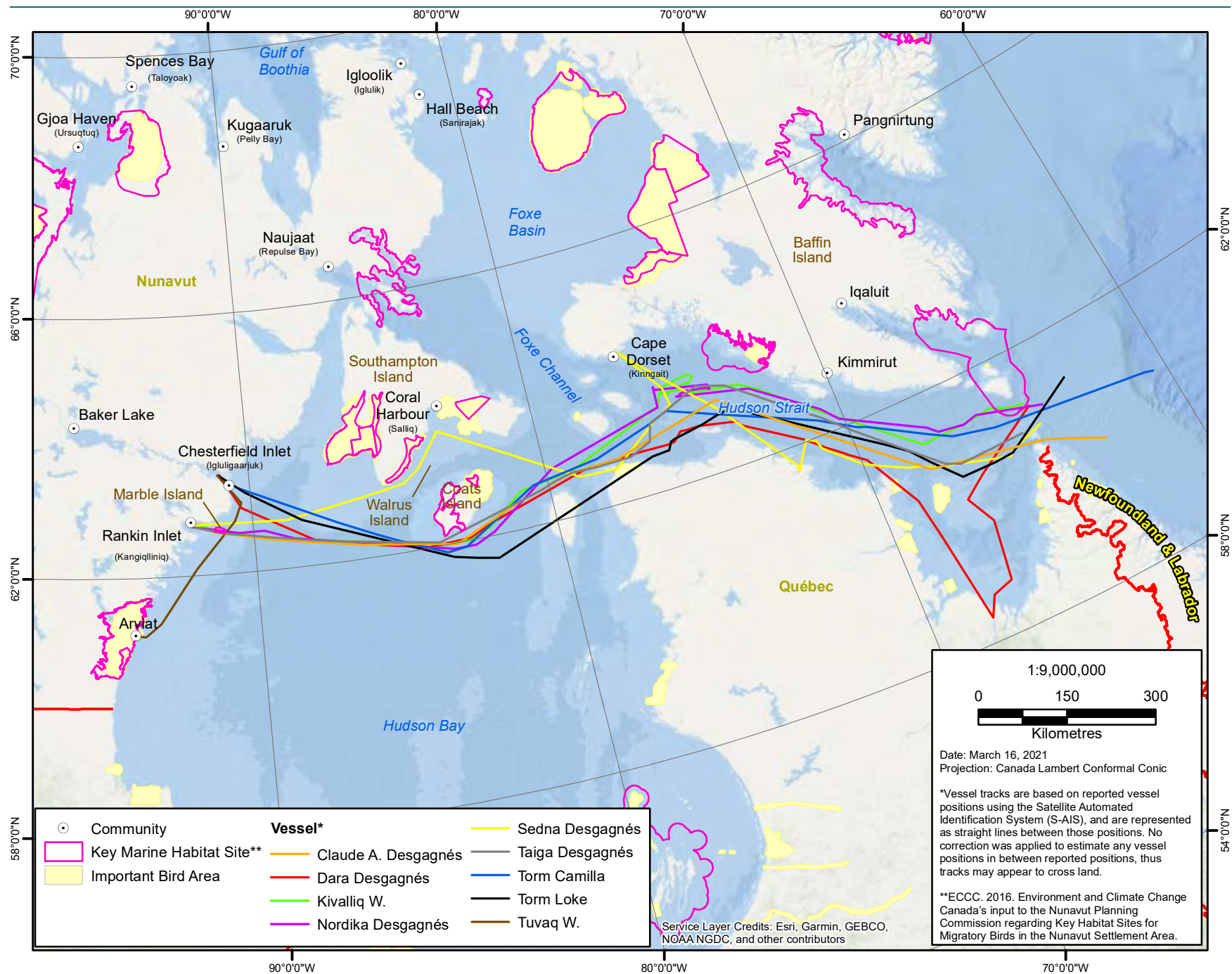
The corridor between Southampton and Coats Islands has been identified by the community of Coal Harbour as an important breeding ground for walrus and marine birds, and as a potential migration route for marine mammals. Due to concerns that vessel traffic between Coats Island, Walrus Island (north of 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.

All vessels servicing the Meadowbank and Meliadine projects travelled south of Coats Island with the exception of two occasions in September 2020, when the captain decided to use the north passage because of safety issues associated with inclement weather, with tides up to 3 m and strong winds.

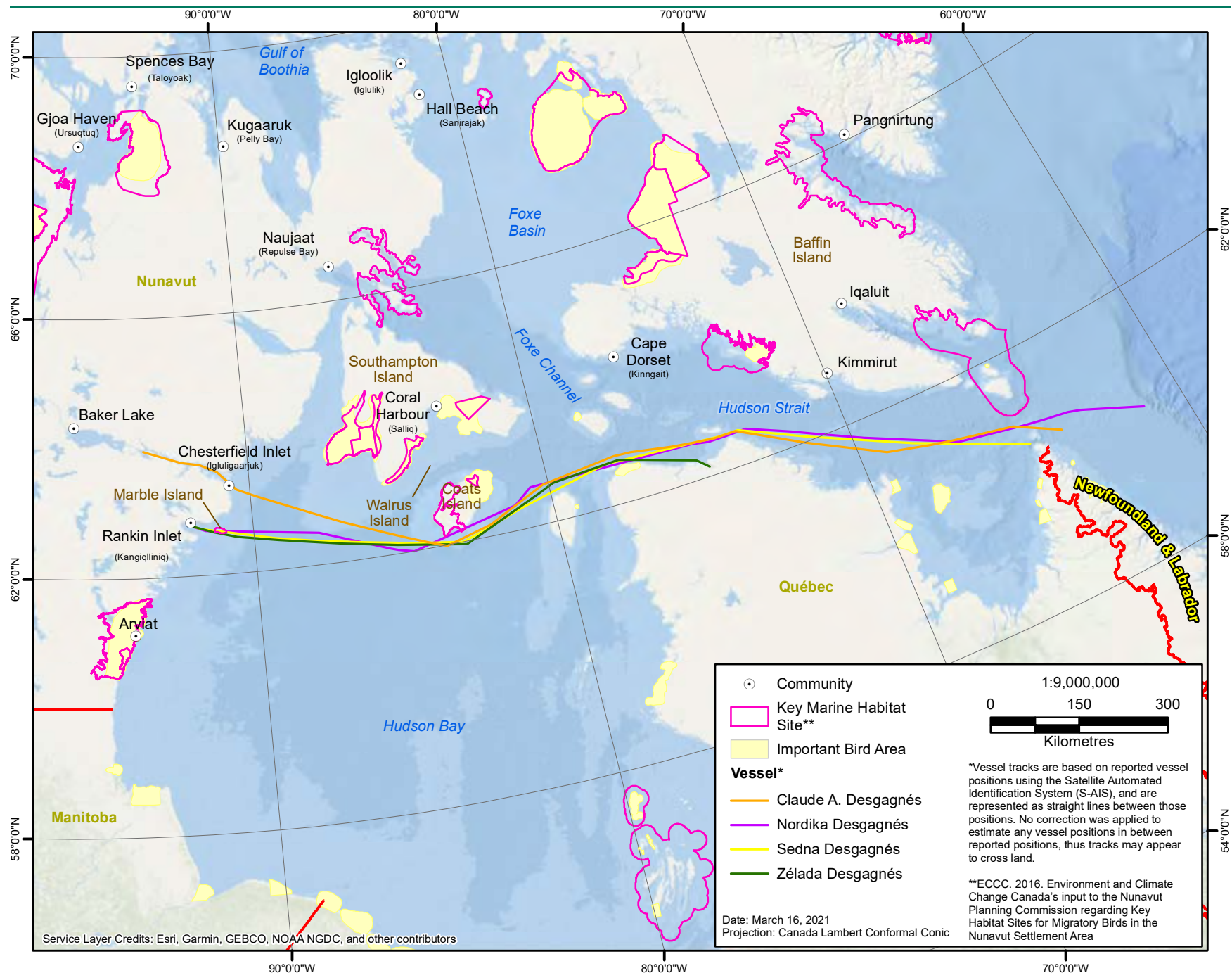
Figure 3.1-3 shows the two vessel tracks on September 14 and 24 passing between the islands (note that the tracks are almost overlapping). On September 14, the Zéleda Desgagnés track data suggest the closest approach (the nearest recorded point location) to Walrus Island was 75 km. On September 24, the Nordika Desgagnés track data suggest the closest approach (i.e., the nearest recorded point location) to Walrus Island was 120 km.

On July 22, the track data indicate that the Sedna Desgagnés also travelled between Southampton and Coats Islands (Figure 3.1-1); however, this vessel serviced the community of Coal Harbour, explaining its presence between Southampton and Coats Islands.

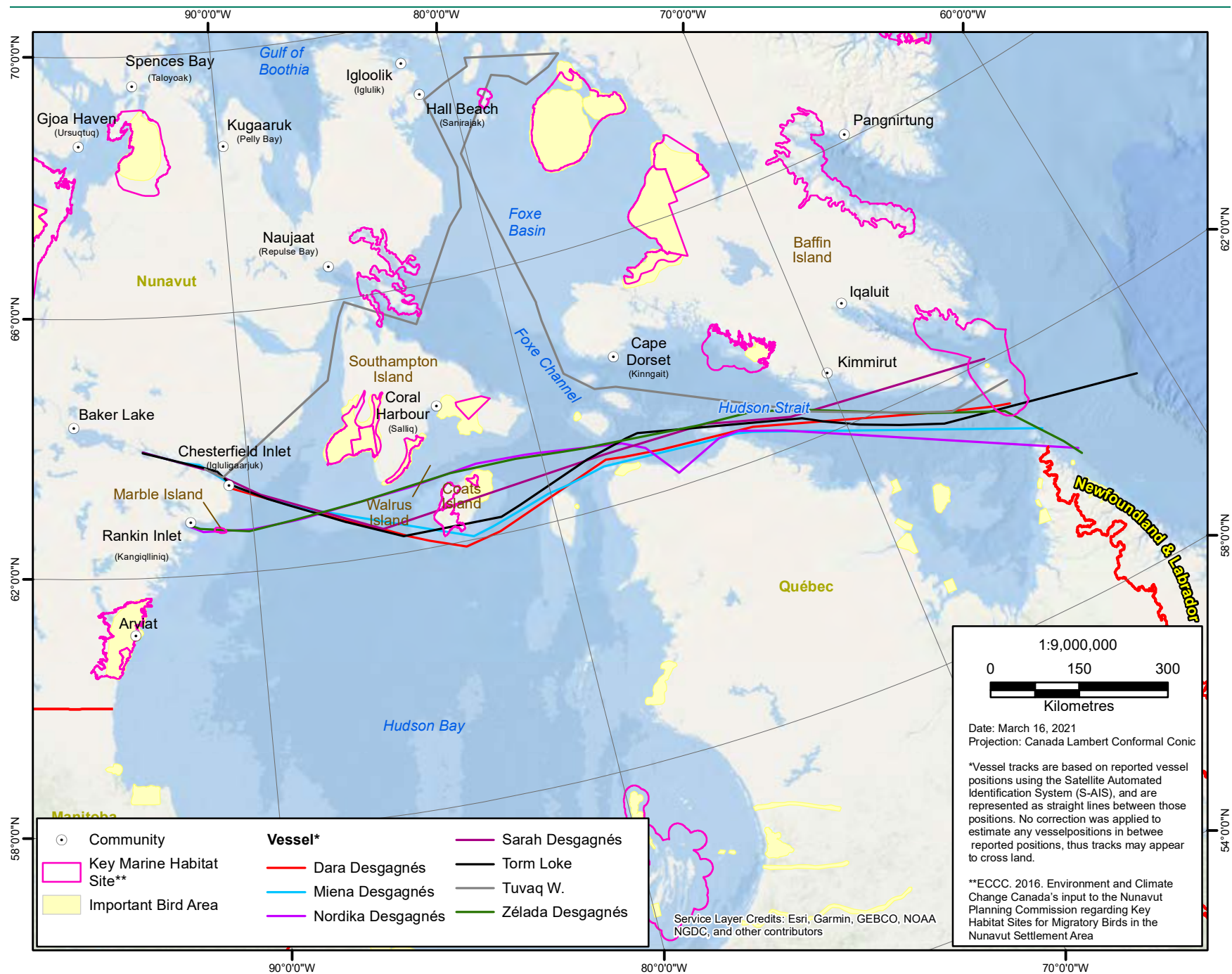




**Figure 3.1-1: Groupe Desgagnés Shipping Tracks, July 2020**

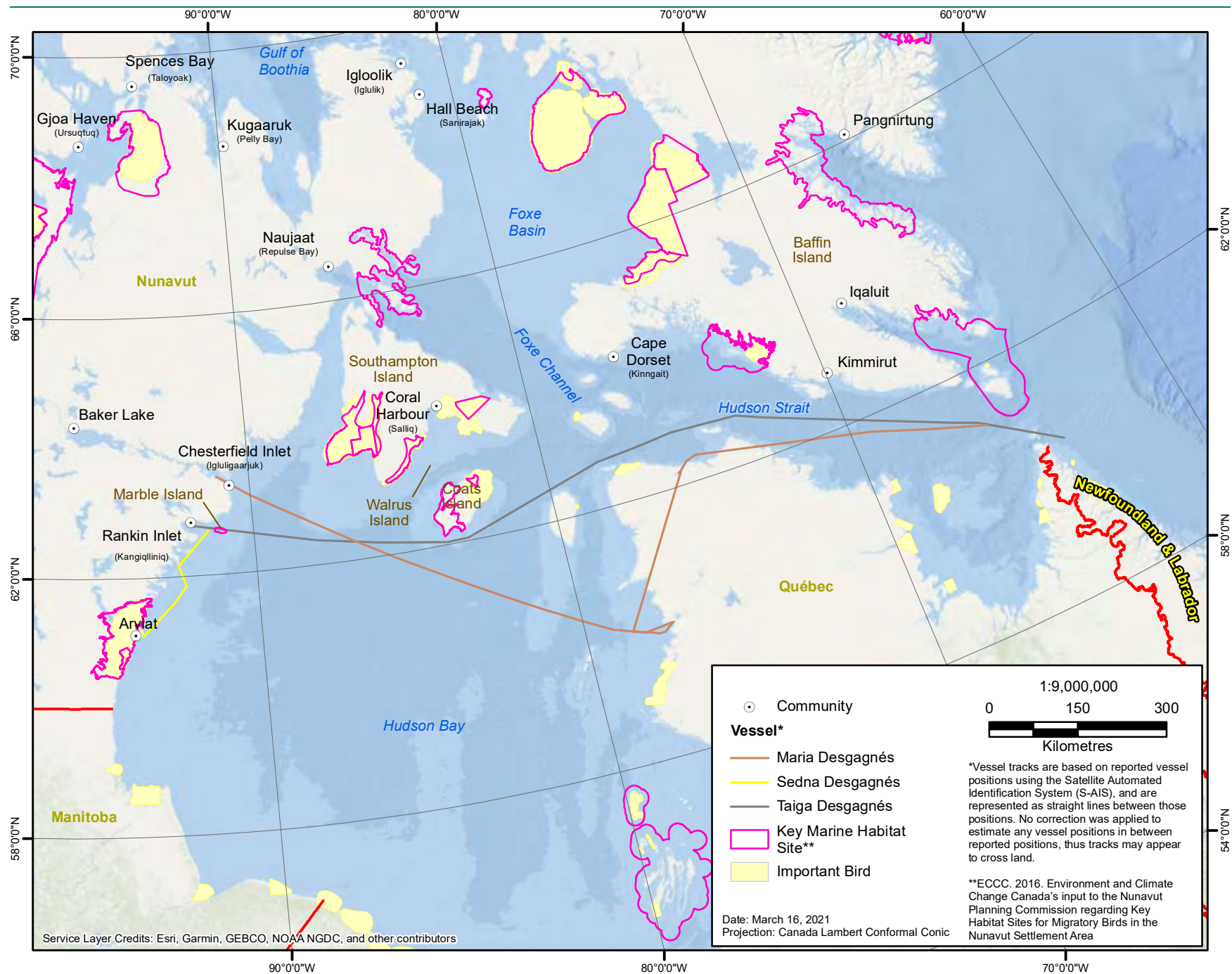


**Figure 3.1-2: Groupe Desgagnés Shipping Tracks, August 2020**



**Figure 3.1-3: Groupe Desgagnés Shipping Tracks, September 2020**





**Figure 3.1-4: Groupe Desgagnés Shipping Tracks, October 2020**

### 3.1.3 Mitigation Measures – Avoidance of Marine Mammals and Seabirds

Marine mammals and seabirds were observed on several occasions in 2020 (Section 3.2 and 3.3). In 2020, none of the marine mammal or seabird sightings were close enough to the vessel to trigger mitigation measures, such as slowing the vessel or changing course.

## 3.2 Marine Mammal Observations

### 3.2.1 Survey Effort

Surveys were conducted in 2020 by dedicated crew MMSOs between Hudson Strait and Rankin Inlet/Helicopter Island between July 1 and October 20 on board various Desgagnés vessels, owned and operated by Groupe Desgagnés. A total of 58 transects were surveyed while the vessel was moving for a total of 2,254.7 km of marine mammal transects over 112 hours (Table 3.2-1; Figure 3.2-1). Four of the 58 transects were conducted on-board the barge travelling between Helicopter Island and Baker Lake. An additional 92 hours of surveying was conducted while the vessel was anchored. Appendix E summarizes all marine mammal surveys and sightings information.

**Table 3.2-1: Marine Mammal Survey Effort, 2017 to 2020**

Year of Survey	Number of Transects Surveyed <sup>1</sup>	Total km Surveyed (Spatial Effort)	Total Time Surveyed (Temporal Effort; hr)	Total Time (hr) Anchored Vessel
2017	11	NA <sup>2</sup>	10.25	0.00
2018	31	1,155.70	29	0.00
2019	38	1,898.30	62.82	59.25
2020	58	2,354.7	112.33	92.5
Total	139	3,054	214.4	151.75

<sup>1</sup> Number of transects surveyed includes survey transects while the vessel was moving.

<sup>2</sup> Spatial data for the 2017 surveys were not available for the 2020 report.

According to the observation datasheets completed by Groupe Desgagnés (Appendix D), marine mammal observer effort in 2020 was greater than previous years (Table 3.2-1). In 2019, observer effort during transit was 62.82 hours and 1,898.30 km. A total of 59.25 hours of effort was conducted while anchored. In 2018, observer effort during transit was 29 hours and 1,155.70 km. There was no stationary effort in 2018.

Datasheets with missing survey times, dates and/or GPS coordinates were not incorporated into the effort analysis. In 2020, there was only one transect that was missing the GPS coordinates for the end location of the transect.

#### 3.2.1.1 Environmental Variables and Weather Conditions

The weather conditions (Figure 3.2-2a) for the 2020 marine mammal observation program were predominantly cloudy, partly cloudy, or clear (40%, 26%, and 17% of the survey effort, respectively). Rain and fog were present for a combined 12% of the survey time, while 5% of the survey effort lacks weather data. Average visibility extended to 12.9 km, with a maximum of 50 km and minimum of 1 km.

The sea state (Figure 3.2-2b) ranged from sea state 0 (calm) to sea state 6 (large waves with white foam crests), though 63% of the time, sea state fell within states 1 (ripples) and 2 (small wavelets all over). Sea state 3 (large wavelets, few whitecaps) and 4 (small waves, frequent whitecaps) conditions occurred

during 27% of the survey effort, with sea state 5 (moderate waves, many whitecaps) and 6 (large waves and white foam crests) occurring infrequently, only 9% of the time. Calm seas (sea state 0) occurred rarely (1% of survey effort), and 1% of the survey effort lacked sea state data.

Glare conditions were generally favourable during surveys in 2020. One third (34%) of the 2020 marine mammal surveys proceeded without a considerable amount of glare, and bright glare was present only 2% of the time (Figure 3.2-2c). Glare was recorded as none/bright and slight/grey 31% and 20% of the time respectively, and glare data is absent for 14% of the survey effort.

### 3.2.2 Marine Mammal Observations 2020

Three species of marine mammals and two unknown species were recorded by Groupe Desgagnés during the MMSO Program in 2020 (Table 3.2-2; Figure 3.2-3). Species observed in 2020 included polar bear (*Ursus maritimus*), harbour seal (*Phoca vitulina*), and white-beaked dolphin (*Lagenorhynchus albirostris*). In addition, there was a sighting of two seals that were not identified to species, as well as a sighting of a group of 15 dolphins that were not identified to species. All sightings were between 145 and 1,000 m from the vessel with the exception of one sighting: the polar bear sow and two cubs were observed approximately 50 m from the vessel swimming east while the vessel was travelling north-northeast (heading of 35 degrees); therefore, to minimize any disturbance, the vessel maintained a straight course to allow the bears to continue swimming. The bears continued to swim without changing behaviour and the vessel travelled away. No marine mammal sightings were close enough to the vessel to trigger mitigation measures, such as slowing the vessel or changing course. In addition, no incidents with marine mammals were reported for the 2020 shipping season.

**Table 3.2-2: Marine Mammal Observations during Surveys, July to September 2020**

Date	Species Observed	Number Observed
July 19	Polar Bear <sup>1</sup>	3
August 2	Unknown Seal Species	2
August 11	Harbour Seal <sup>2</sup>	1
August 15	White-beaked Dolphin	15 <sup>3</sup>
September 1	Unknown Dolphin Species	15

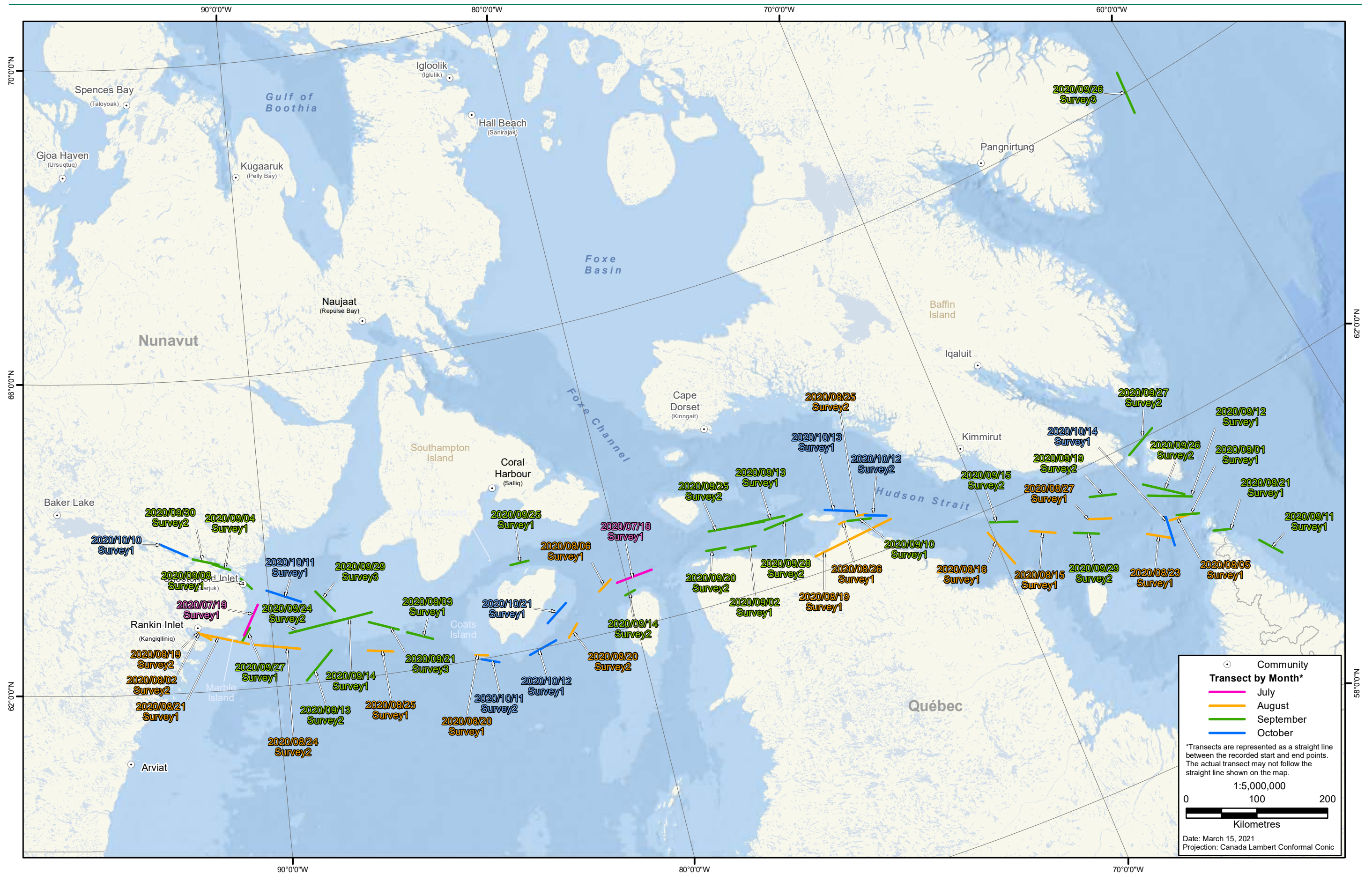
<sup>1</sup> Species listed as Special Concern on Schedule 1 of the federal Species at Risk Act (SARA).

<sup>2</sup> The harbour seal was observed in Baker Lake during wildlife monitoring on the barge, but is reported here as well as in Section 4 of this report, as a dedicated survey was underway when the animal was observed.

<sup>3</sup> A group of dolphins was observed twice on August 15 – first with 6 animals observed, then with 15 animals observed. Only the highest number is reported here to avoid double counting.

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 seven incidental observations during 2020 (Table 3.2-3; Figure 3.2-4). Species observed incidentally included polar bears (four sightings of five individuals), unknown seal species (three sightings of three individuals), and Atlantic walrus (*Odobenus rosmarus rosmarus*; one sighting of one individual). All incidental observations were in June and July.





**Figure 3.2-1: Marine Mammal Survey Transects, July to October 2020**



**Figure 3.2-2: Percent Weather, Sea State, and Glare Conditions During Marine Mammal Surveys Conducted in 2020**

**Table 3.2-3: Incidental Observations of Marine Mammals, June and July, 2020**

Date	Species Observed	Number Observed
June 29	Polar Bear <sup>1</sup>	1
June 30	Polar Bear <sup>1</sup>	1
July 2	Unknown Seal Species	1
July 7	Polar Bear <sup>1</sup>	2
July 7	Polar Bear <sup>1</sup>	1
July 9	Unknown Seal Species	1
July 9	Atlantic Walrus	1

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

### 3.2.2.1 Polar Bears

One group of three polar bears was observed during dedicated surveys on July 19, 2020, when a female and two cubs were observed near Marble Island (Figure 3.2-3) in the water swimming east. In addition, polar bears were observed incidentally (i.e., not during a dedicated survey) on four occasions: one individual on June 29, one individual on June 30, two individuals on July 7, and one individual on July 7. All sightings were of adults and were observed approaching the entrance to Hudson Strait near Resolution Island (Figure 3.2-4). Some of these sightings were likely re-sightings due to the timing and number observed.

### 3.2.2.2 White-beaked Dolphins

On August 15, 2020, a group of 15 white-beaked dolphins were observed during dedicated surveys at the eastern edge of the project RSA in Hudson Strait (Figure 3.2-3). On September 1, another group of approximately 15 dolphins was observed in Hudson Strait, but further east closer to Resolution Island (Figure 3.2-4), although the animals were not identified to species. It is likely that this group of dolphins were also white-beaked dolphins, as the sighting was at a similar location and two weeks after the previous observation of dolphins, and this is the only dolphin species that has been observed this far north. Dolphins are a rare sighting in the Arctic and this is the first time they have been recorded during MMSO surveys for the project. Over the last 15 years, there have been occasional sightings of white-beaked dolphins in the Arctic, including around Baffin Island (Reinhart et al. 2014).

### 3.2.2.3 Seals

Seals were observed on two separate occasions during dedicated marine mammal surveys: two unknown seal species were observed on August 2, 2020, near Marble Island, and one harbour seal was observed on August 11 in Baker Lake (Figure 3.2-3). The harbour seal was observed during wildlife monitoring aboard the barge, and is also reported in Section 4. In addition, unknown seal species were observed incidentally on two occasions: one seal on July 2, and one seal on July 9, both within Hudson Strait (Figure 3.2-4).

### 3.2.2.4 Atlantic Walrus

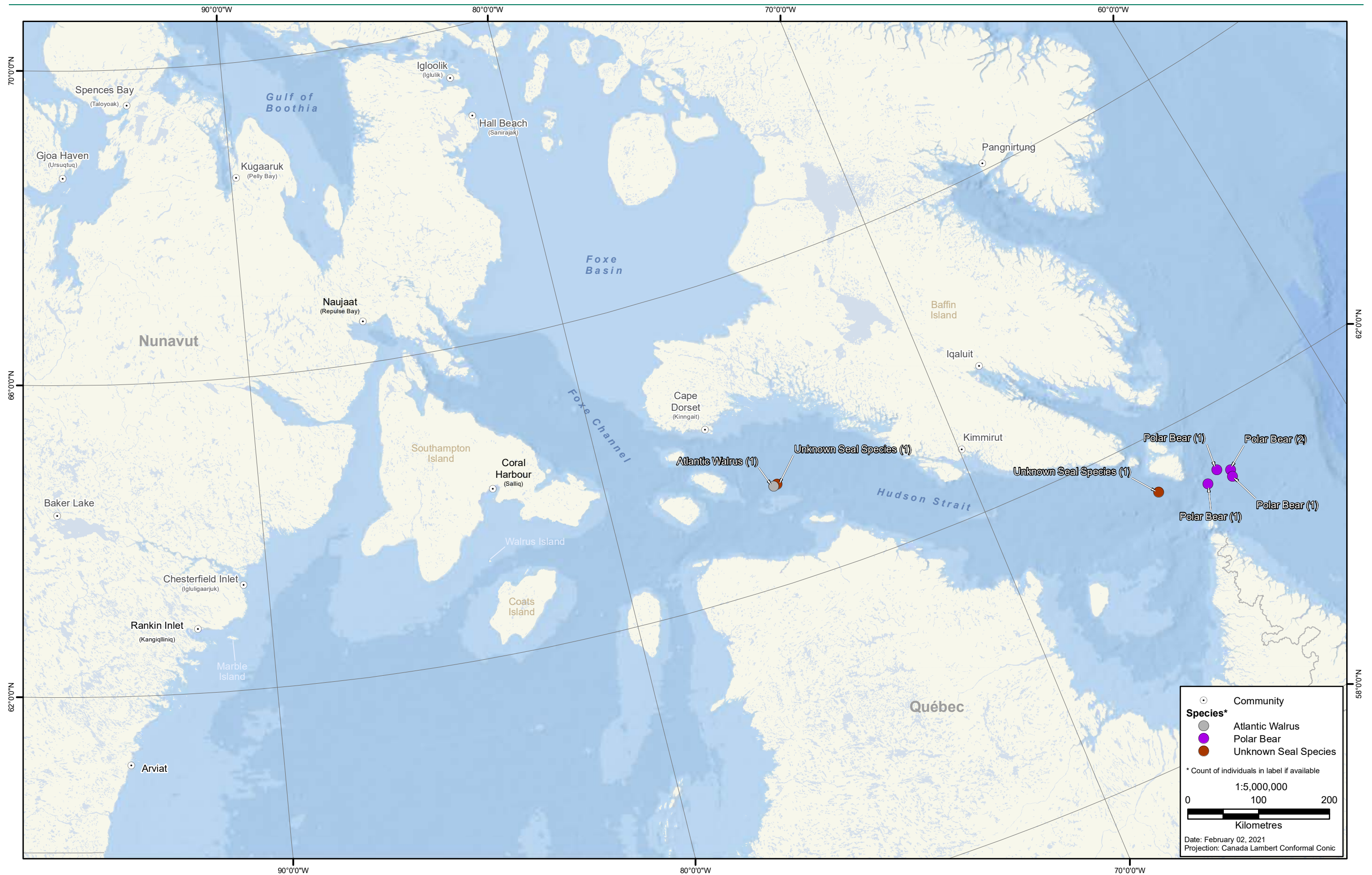
One Atlantic walrus was observed incidentally (i.e., off-effort) on July 9, 2020, in Hudson Strait, east of Salisbury Island (Figure 3.2-4). No additional information regarding this sighting was recorded.





**Figure 3.2-3: Marine Mammals Observed during MMSO Surveys, July to September, 2020**





**Figure 3.2-4: Incidental Observations of Marine Mammals, June and July, 2020**

### 3.2.3 Marine Mammal Observations 2017 to 2020

Five species (three species, and two unknown species) of marine mammals were recorded by Groupe Desgagnés during the MMSO Program in 2020 compared to five species in 2019 and no recorded observations of marine mammals during surveys in 2018 or 2017 during surveys; however, marine mammals were observed incidentally (off-effort) in 2017 (Table 3.2-4).

Species observed during surveys in 2019 included bowhead whale (*Balaena mysticetus*; one sightings of three to four individuals), fin whale (*Balaenoptera physalus*; one sighting of one individual), harp seal (*Pagophilus groenlandicus*; one sighting of four individuals), killer whale (*Orcinus orca*; 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).

**Table 3.2-4: Number<sup>1</sup> of Marine Mammals Observed during Surveys and Incidentally<sup>2</sup> between 2017 and 2020<sup>3</sup>**

Species	2017	2019	2020	Total
Bowhead whale	-	3	-	3
Fin whale <sup>4</sup>	-	1	-	1
Killer whale	-	8	-	8
White-beaked dolphin	-	-	15	15
Unknown dolphin species	-	-	15	15
Harp seal	-	4	-	4
Harbour seal	-	-	1	1
Ringed seal	1	-	-	1
Unknown seal	2	-	4	6
Walrus	6	-	4	10
Polar bear <sup>4</sup>	-	1	8	9
<b>Total</b>	<b>9</b>	<b>17</b>	<b>47</b>	<b>73</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 were both during surveys and incidental.

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

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

### 3.3 Seabird Observations

#### 3.3.1 Survey Effort

Seabird surveys have been conducted since 2018. Surveys were conducted in 2020 by dedicated MMSOs between Hudson Strait and Rankin Inlet/Helicopter Island between July 1 and October 20 on board various Groupe Desgagnés vessels. In 2020, 79 transects with known distance effort were surveyed while the vessel was moving, with 3,614 km of seabird survey distance recorded over 111 hours (Table 3.3-1). An additional 152 hours of stationary surveys were conducted while the vessel was anchored (Table 3.3-2).

**Table 3.3-1: Moving Vessel Survey Effort 2018 to 2020**

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

<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.

**Table 3.3-2: Stationary Vessel Surveys Effort 2018 to 2020**

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

\* 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.

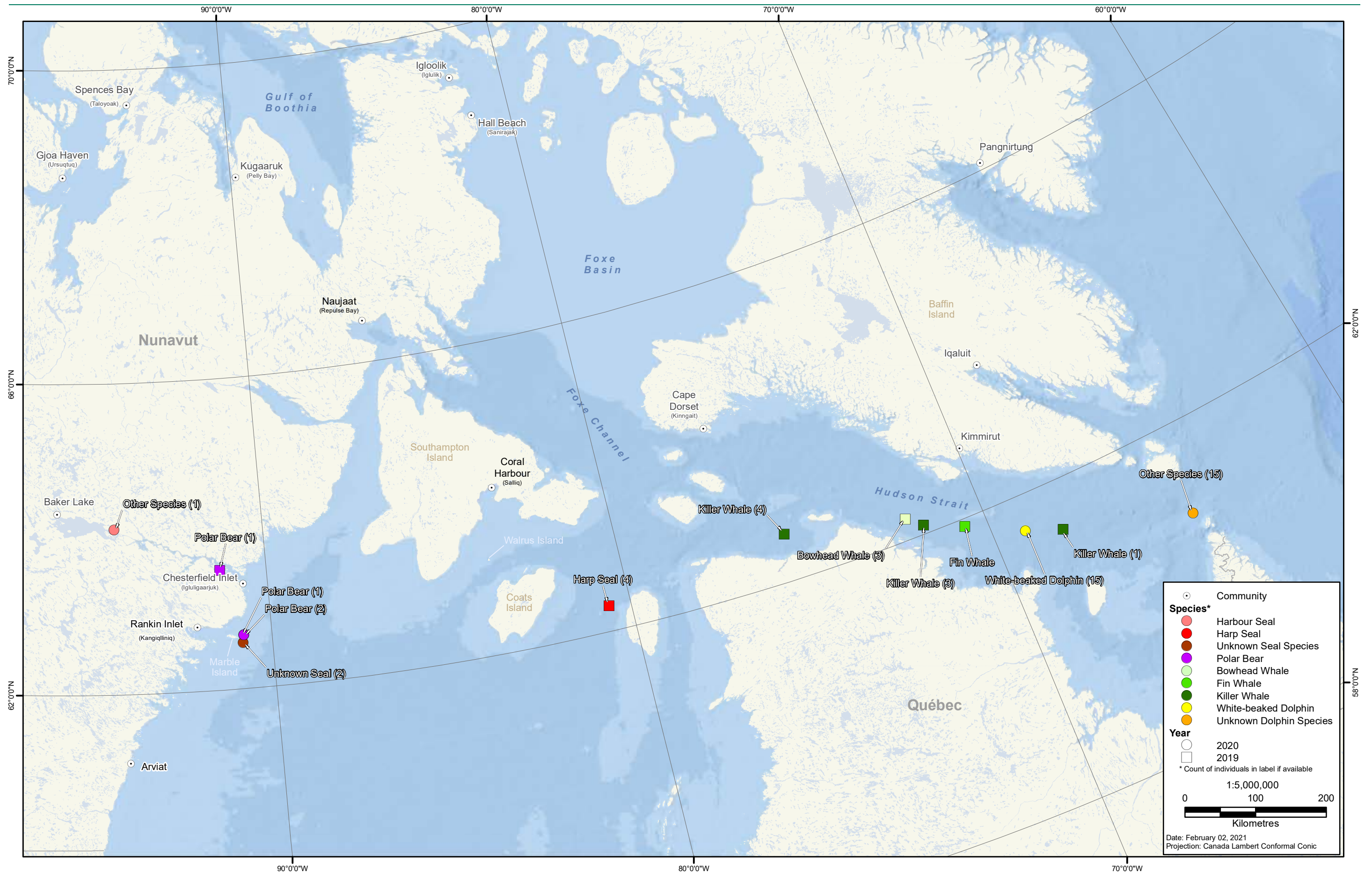
Some surveys did not have effort recorded; surveys without distance effort did not have location coordinates recorded at the start and/or end of the surveys, while surveys without temporal effort did not have the start and/or end times recorded. Surveys without distance effort were not used for analysis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

Temporal effort for moving surveys was similar across years (2018 to 2020), but spatial effort was higher in 2020, with roughly 1,300 km greater distance covered in 2020 than 2019 (Table 3.3-1). Effort for stationary vessel surveys was much higher in 2020 than previous years, with five times the number of surveys conducted in 2020 compared to the previous two years combined (Table 3.3-2).

##### 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 3.3-1). 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 fog, gale force winds, and very rough sea states (Figure 3.3-1). These observations represent a handful of the several hundred detections recorded across all years of surveys, so it is unlikely that the overall detection estimates are impacted by weather variables.

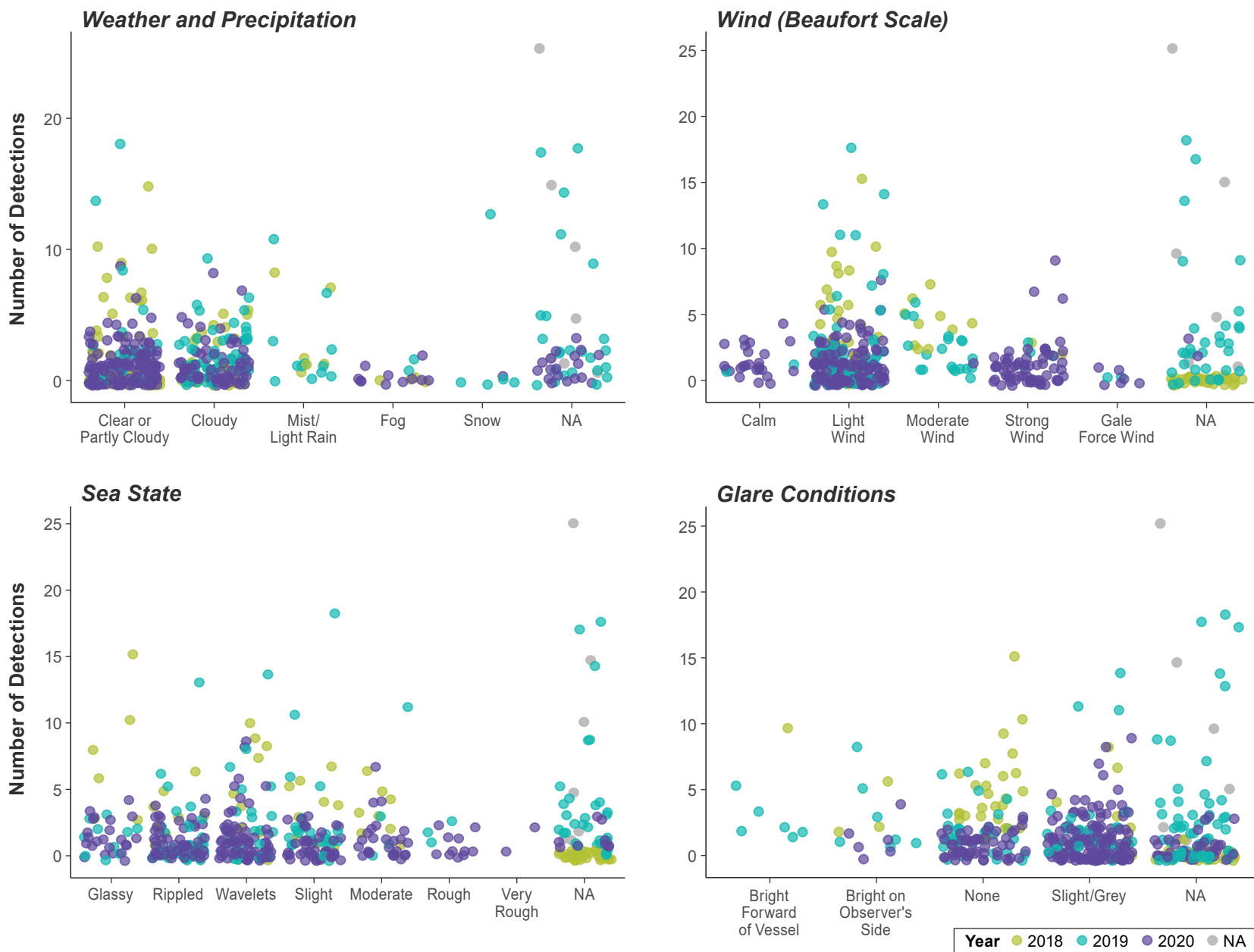




**Figure 3.2-5: Marine Mammals Observed during MMSO Surveys, 2019 and 2020**







**Figure 3.3-1: Weather Variables Summarized by Seabird Detections**

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.

### 3.3.2 Moving Vessel Seabird Observations 2018 to 2020

Analyses included only on-transect sightings and did not use re-sightings of the same birds. Table 3.3-3 summarizes samples sizes for surveys, detections (groups) and individuals (total number of birds).

**Table 3.3-3: Seabird Survey Sample Sizes**

Year	Moving Vessel Surveys			Stationary Vessel Surveys		
	Transects	Detections	Individuals	Points	Detections	Individuals
2018	33	150	574	5	0*	0*
2019	79	271	1,639	42	22	24
2020	79	116	683	144	103	536

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

#### 3.3.2.1 Species Present

In 2020, a total of 958 individual birds belonging to 25 known species and four unknown species were recorded during moving vessel surveys (Table 3.3-4). Over three years of surveys between 2018 and 2020, 48 species and 3,446 individual birds have been recorded across all years of seabird moving vessel surveys (Table 3.3-4; Figure 3.3-2). In 2020, the most common species recorded was northern fulmar ( $n = 300$ ), followed by thick-billed murre ( $n = 90$ ), common eider ( $n = 81$ ) and herring gull ( $n = 73$ ). The same species were the most commonly recorded across all years, with the exception of snow goose, which had the highest number observed overall due to large numbers observed in 2019 ( $n = 552$ ).

**Table 3.3-4: Bird Species Recorded during Moving Vessel Seabird Surveys, 2018 to 2020**

Species	Scientific Name	2018	2019	2020	Total
Bald Eagle	<i>Haliaeetus leucocephalus</i>	0	2	0	2
Black-legged Kittiwake	<i>Rissa tridactyla</i>	0	12	3	15
Black Guillemot	<i>Cepphus grylle</i>	137	14	0	151
Black Scoter	<i>Melanitta americana</i>	0	4	2	6
Cackling/Canada Goose	<i>Branta hutchinsii/ canadensis</i>	0	100	0	100
Common Eider	<i>Somateria mollissima</i>	4	12	81	97
Common Loon	<i>Gavia immer</i>	1	32	2	35
Common Murre	<i>Uria aalge</i>	0	40	3	43
Dovekie	<i>Alle alle</i>	76	27	19	122
Glaucous Gull	<i>Larus hyperboreus</i>	91	84	33	208
Great Cormorant	<i>Phalacrocorax carbo</i>	0	0	8	8
Great Shearwater	<i>Puffinus gravis</i>	0	0	1	1
Great Skua	<i>Stercorarius skua</i>	0	0	48	48
Harlequin Duck <sup>1</sup>	<i>Histrionicus histrionicus</i>	10	0	0	10
Herring Gull	<i>Larus argentatus</i>	0	288	73	361

Species	Scientific Name	2018	2019	2020	Total
Iceland Gull	<i>Larus glaucooides</i>	78	0	4	82
Ivory Gull <sup>2</sup>	<i>Pagophila eburnea</i>	2	0	0	2
Leach's Storm-petrel	<i>Oceanodroma leucorhoa</i>	0	8	0	8
Least Sandpiper	<i>Calidris minutilla</i>	0	5	1	6
Long-tailed Duck	<i>Clangula hyemalis</i>	3	4	0	7
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	1	6	0	7
Manx Shearwater	<i>Puffinus puffinus</i>	0	3	0	3
Northern Fulmar	<i>Fulmarus glacialis</i>	43	153	300	496
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	0	0	14	14
Peregrine Falcon	<i>Falco peregrinus</i>	0	3	1	4
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	1	7	48	56
Razorbill	<i>Alca torda</i>	0	0	2	2
Red-breasted Merganser	<i>Mergus serrator</i>	0	0	2	2
Ruddy Turnstone	<i>Arenaria interpres</i>	0	1	0	1
Sabine's Gull	<i>Xema sabini</i>	3	1	5	9
Snow Goose	<i>Chen caerulescens</i>	0	542	10	552
Snowy Owl	<i>Bubo scandiacus</i>	0	1	0	1
Sooty Shearwater	<i>Ardenna grisea</i>	0	0	2	2
Thayer's Gull	<i>Larus thayeri</i>	0	5	1	6
Thick-billed Murre	<i>Uria lomvia</i>	141	228	90	459
White-winged Scoter	<i>Melanitta deglandi</i>	0	0	5	5
Wilson's Storm-petrel	<i>Oceanites oceanicus</i>	23	8	0	31
Unknown Bird		0	87	0	87
Unknown Duck		27	76	3	106
Unknown Falcon		0	1	2	3
Unknown Gull		34	48	152	234
Unknown Hawk		0	2	0	2
Unknown Jaeger		0	3	0	3
Unknown Murre		0	0	43	43
Unknown Sandpiper		6	0	0	6
<b>Total</b>		<b>681</b>	<b>1,807</b>	<b>958</b>	<b>3,446</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 Species at Risk Act (SARA).



### 3.3.2.2 Distance Analysis: Seabird Detection and Density Estimates

Distance analysis was conducted for moving vessel surveys in 2019, 2020, and all years combined (2018 to 2020). 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 easier to see 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) is the same between years. Model fitting was consistent across years, indicating that the detectability was the same across all years of the study (according to AIC rankings and detectability estimates; Table 3.3-5). The best model fits 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.

**Table 3.3-5: Top Three AIC-rated Distance Models, Moving Vessel Surveys**

Year	Model Key and Adjustment	Detection Estimate	Detection SE <sup>1</sup>	$\Delta$ AIC <sup>2</sup>
All Years	Hazard-rate with cosine adjustment	0.371	0.018	0.000
	Half-normal with cosine adjustment	0.363	0.018	10.689
	Hazard-rate, no adjustment	0.376	0.028	25.830
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

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

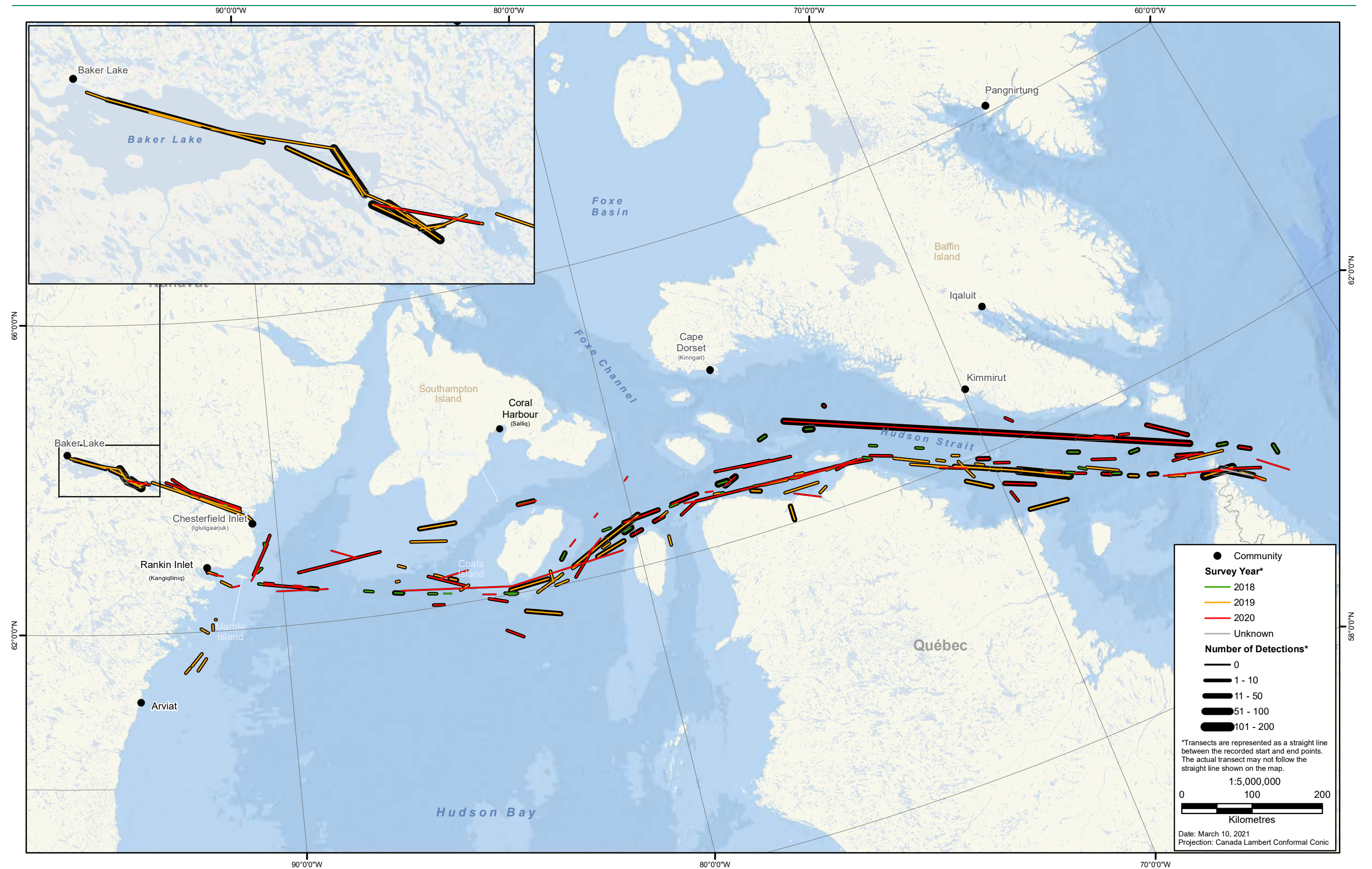
<sup>2</sup> Akaike's Information Criteria (AIC), presented as the relative difference in ranking model fit. The lowest value is the best fit model.

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 the highest density predicted in 2019 (1.879 birds/ km<sup>2</sup>), which was more than twice the lowest predicted density in 2020 (0.701 birds/ km<sup>2</sup>; Table 3.3-6). The differences in estimated density are a reflection of variability in overall detection rate between years; there were almost twice as many birds detected in 2019 than in 2020 despite greater spatial effort in 2020 (see Tables 3.3-1 and 3.3-4). 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.

**Table 3.3-6: Detection and Density Estimates by Year, 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	0.371	0.335- 0.407	1.402	0.993- 1.979
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

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



**Figure 3.3-2: Seabird Detections during Moving Vessel Surveys, 2018 - 2020**



### 3.3.3 Stationary Vessel Seabird Observations 2019 to 2020

#### 3.3.3.1 Species Present

A total of 560 individuals from 24 species were recorded during stationary vessel surveys in 2019 and 2020 (Table 3.3-7, Figure 3.3-3). Nearly 96% of records were from 2020 (n = 536 individuals). The most common species recorded in 2020 were snow goose (n = 176), followed by northern fulmar (n = 170) and herring gull (n = 64; Table 3.3-7).

**Table 3.3-7: Bird Species Recorded during Stationary Vessel Seabird Surveys, 2019 to 2020**

Species	Scientific Name	2019	2020	Total
American Crow	<i>Corvus brachyrhynchos</i>	0	1	1
Arctic Tern	<i>Sterna paradisaea</i>	0	1	1
Black-legged Kittiwake	<i>Rissa tridactyla</i>	0	8	8
Black Guillemot	<i>Cephus grylle</i>	1	4	5
Black Scoter	<i>Melanitta Americana</i>	2	0	2
Cackling/Canada Goose	<i>Branta hutchinsii/ canadensis</i>	0	25	25
Common Eider	<i>Somateria mollissima</i>	0	8	8
Glaucous Gull	<i>Larus hyperboreus</i>	4	18	22
Herring Gull	<i>Larus argentatus</i>	6	64	70
Leach's Storm-petrel	<i>Oceanodroma leucorhoa</i>	0	1	1
Northern Fulmar	<i>Fulmarus glacialis</i>	2	170	172
Peregrine Falcon	<i>Falco peregrinus</i>	3	5	8
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	1	4	5
Razorbill	<i>Alca torda</i>	0	3	3
Sandhill Crane	<i>Grus canadensis</i>	0	1	1
Snow Goose	<i>Chen caerulescens</i>	0	176	176
Snowy Owl	<i>Bubo scandiacus</i>	0	1	1
Thick-billed Murre	<i>Uria lomvia</i>	0	17	17
White-winged Scoter	<i>Melanitta deglandi</i>	0	2	2
Unknown Bird		1	0	1
Unknown Falcon		0	2	2
Unknown Gull		4	17	21
Unknown Murre		0	6	6
Unknown Sandpiper		0	2	2
<b>Total</b>		<b>24</b>	<b>536</b>	<b>560</b>

### 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 2020 and for all years combined (2019 and 2020), though very little data were collected in 2019. Of the three model selection functions, only half-normal models converged and showed adequate goodness of fit. The half-normal model with no adjustments indicates that detection decreases gradually with greater distance from the observer.

Detection estimates were much lower (about half of the value) for stationary vessel surveys compared to moving vessel surveys ( $0.168 \pm 0.022$  for All Years; Table 3.3-8). This is consistent with the data, which indicate that both detections and number of birds recorded per survey were much lower for stationary surveys compared to moving surveys (Table 3.3-3). Density estimates were not able to be calculated for stationary surveys because effort requires repeated surveys at the same locations.

**Table 3.3-8: Detection Estimates by Year, Stationary Vessel Surveys**

Year	Detection Estimate	Detection 95% CIs <sup>1</sup>
All Years	0.168	0.146- 0.190
2020	0.173	0.146- 0.200

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

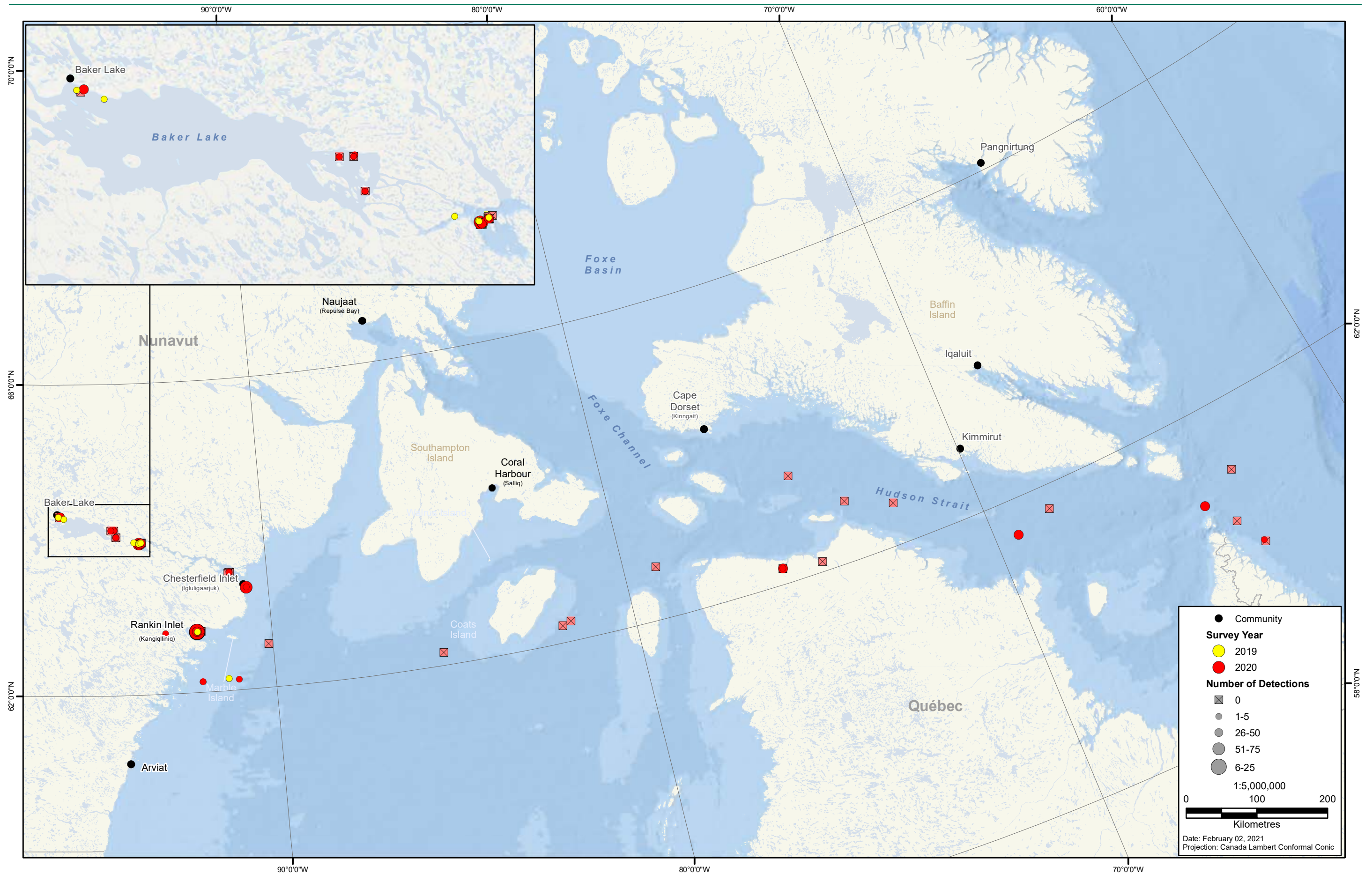
## 3.4 Marine Wildlife Observations – Baker Lake

When transporting equipment and fuel from Bécancour to Baker Lake, deep-water vessels can enter Chesterfield Inlet, but must stop at Helicopter Island 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 Division is required to engage a local area marine wildlife monitor on-board 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. 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 2020, 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 had their MMSOs record sightings of marine mammals and seabirds when possible while travelling on the barge; however, given the navigational complexity of the area (i.e., difficult passage with tight turns through narrow passage) and rest requirements for crew, a limited number of surveys (total of eight surveys) were conducted in this area in 2020.

In 2020, four marine mammal survey transects were conducted in August by the dedicated Groupe Desgagnés MMSO while on transporting fuel between Helicopter Island and Baker Lake on August 9, August 10, and twice on August 12 (Figure 3.4-1). During the surveys, one harbor seal was recorded in August (Figure 3.2-3). In addition, four seabird surveys were conducted in 2020 on July 27, July 28, August 15, and August 18 (see inset in Figure 3.3-2). Seventeen birds were observed, including seven herring gulls, three northern fulmars, two cormorants, two black scoters, one pomarine jaeger, one glaucous gull, and one unknown gull.



**Figure 3.3-3: Seabird Detections during Stationary Vessel Surveys, 2019 - 2020**

Table 3.4-1 summarizes the survey effort while on the barges between 2008 and 2020. Tables 3.4-2 and 3.4-3 summarize marine mammal and seabird observations made by the local marine mammal monitors on-board contractor vessels transporting fuel for the Meadowbank Mine between Helicopter Island and Baker Lake between 2008 and 2019, and by Groupe Desgagnés crew members in 2020. Bird observations are summarized in species groups, as they were not often identified to the species. Seals were the most commonly observed marine mammal, and snow geese were the most commonly observed bird during community surveys. In addition, caribou (*Rangifer tarandus*), muskox (*Ovibos moschatus*), fox (*Vulpes* species), wolves (*Canis lupis*), and rabbits (*Lepus arcticus*) were observed on land from the vessel between 2008 and 2019. No sightings of marine mammals were recorded during the barge surveys between 2011 and 2019.

**Table 3.4-1: Barge Survey Effort between Helicopter Island and Baker Lake, 2008 to 2020<sup>1</sup>**

Year	Survey Dates	Total Number of Days Surveyed
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

\* Indicates specific dates were not provided – either only months were provided, approximates 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, surveys were conducted by Groupe Desgagnés vessel crew members rather than community members.

<sup>2</sup> No dates were provided for 2018, however it was noted that 153 hrs of surveys were completed. Therefore it was assumed that surveys were conducted 8 hrs 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.



**Table 3.4-2: Marine Mammals Observed during Barge Surveys between Helicopter Island and Baker Lake, 2008 to 2020<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	-

<sup>1</sup> Marine mammals were only observed during wildlife monitoring surveys in 2008, 2009, 2010, and 2020. No other marine mammals were recorded during surveys between 2011 and 2019. During 2020, surveys were conducted by Groupe Desgagnés 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).

**Table 3.4-3: Seabirds Observed during Barge Surveys between Helicopter Island and Baker Lake, 2008 to 2020**

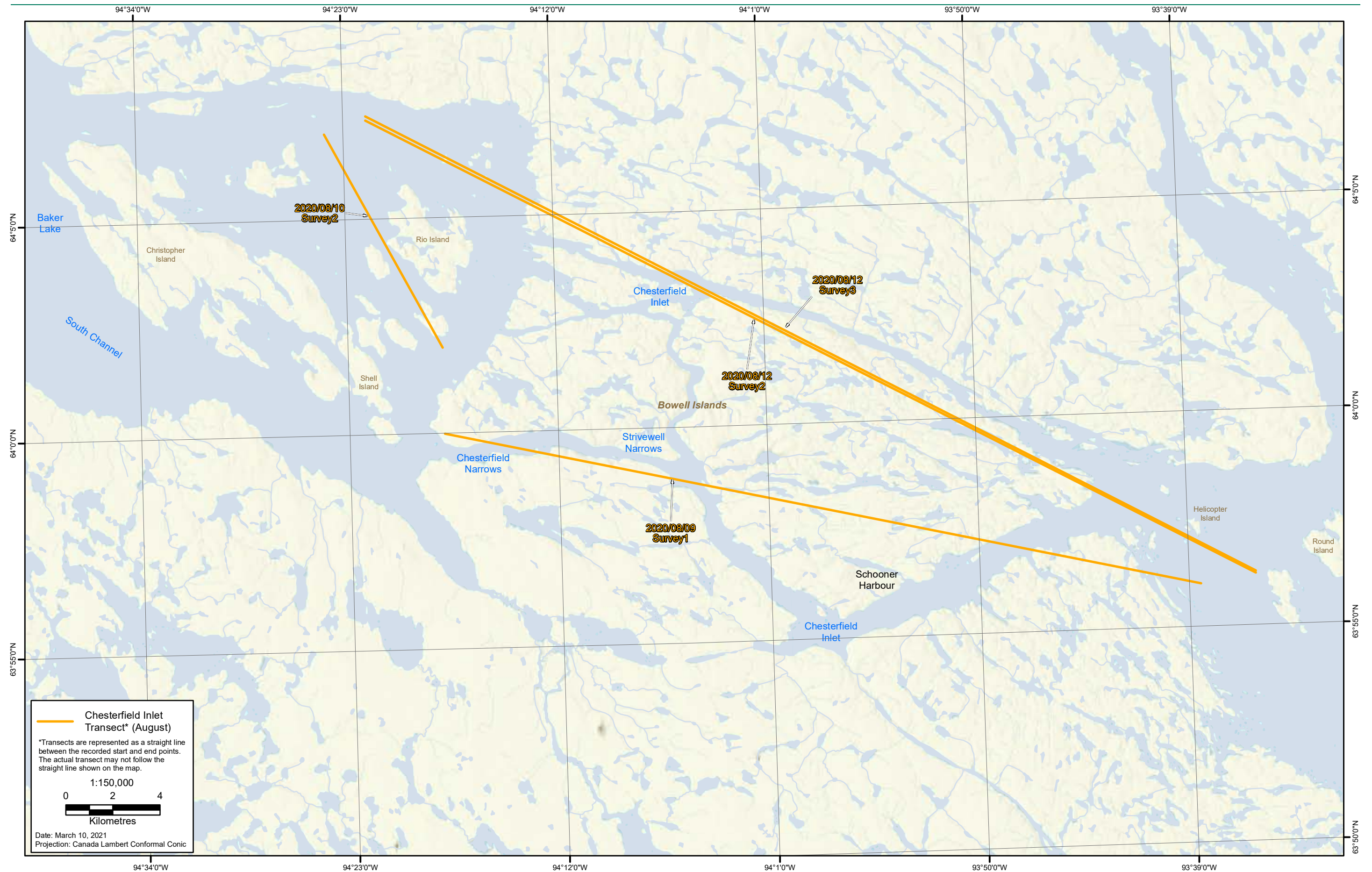
Year	Month	Number of Surveys	Gulls/ Terns	Loons	Snow Geese	Waterfowl	Other Seabird	Eagle/ Falcon	Unknown Birds
2008	July	1	-	1	-	-	-	-	-
2008	August	2	1+*	1	-**	-	-	-	-
2009	August	2	1+	-	1+	1+	-	3	-
2009	September	1	1+	3	1,000+	5	-	1	-
2010	October	1	-	-	-	-	-	-	-
2011	July	1	-	-	-	2	-	-	-
2011	August	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***	-	-

\* 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.

\*\* '-' indicates none observed.

\*\*\* Includes northern fulmar, cormorant, and jaeger.





**Figure 3.4-1: Wildlife Monitoring Surveys between Helicopter Island and Baker Lake, 2020**

## 4. REFERENCES

- AEM. 2018a. *Agnico Eagle- Meadowbank Division- Shipping Management Plan 2018 (Version 3)*. Agnico Eagle. December 2018.
- AEM. 2018b. *Agnico Eagle – Meliadine Division – Shipping Management Plan 2018 (Version 7)*. Agnico Eagle.
- AEM. 2018c. *Marine Mammal Management and Monitoring Plan*; Appendix B of the Meadowbank Shipping Management Plan (AEM 2018a).
- AEM. 2018d. *Marine Environmental Management Plan*; Appendix D of the Meliadine Shipping Management Plan (AEM 2018b).
- Akaike, H. 1973. *Information theory as an extension of the maximum likelihood principle*. Second international symposium on information theory. B. N. Petrov and F. Csaki. Akademiai Kiado, Budapest: 267-281.
- Buckland, S. T. et al. 2001. *Introduction to Distance Sampling: Estimating Abundance of Biological Populations*. Oxford, UK, Oxford University Press.
- Gjerdrum et al. 2012. *Eastern Canada Seabirds at Sea (ECSAS) Standardized Protocol for Pelagic Seabird Surveys from Moving and Stationary Platforms*.
- Miller, D. L., et al. 2019. "Distance Sampling in R." *Journal of Statistical Software* 89(1).
- NIRB. 2018. Project Certificate NIRB [NO.: 004] issued December 2018 by the Nunavut Impact Review Board (assigned to Agnico Eagle Mines Limited).
- NIRB. 2019. Project Certificate NIRB [NO.: 006] issued February 2019 by the Nunavut Impact Review Board (assigned to Agnico Eagle Mines Limited).
- NIRB. 2020. Project Certificate NIRB [NO.: 008] issued February 2020 by the Nunavut Impact Review Board (assigned to Agnico Eagle Mines Limited).
- R Core Team. 2021. *R: A Language and Environment for Statistical Computing*. Vienna, Austria, R Foundation for Statistical Computing.
- Vesseltracker. 2021. *Fleet AIS Account*. <http://www.vesseltracker.com>. Accessed January 2021.

## **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 2018a; 2018b) 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:

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**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

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

Monitoring for marine mammals and seabirds

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**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

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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

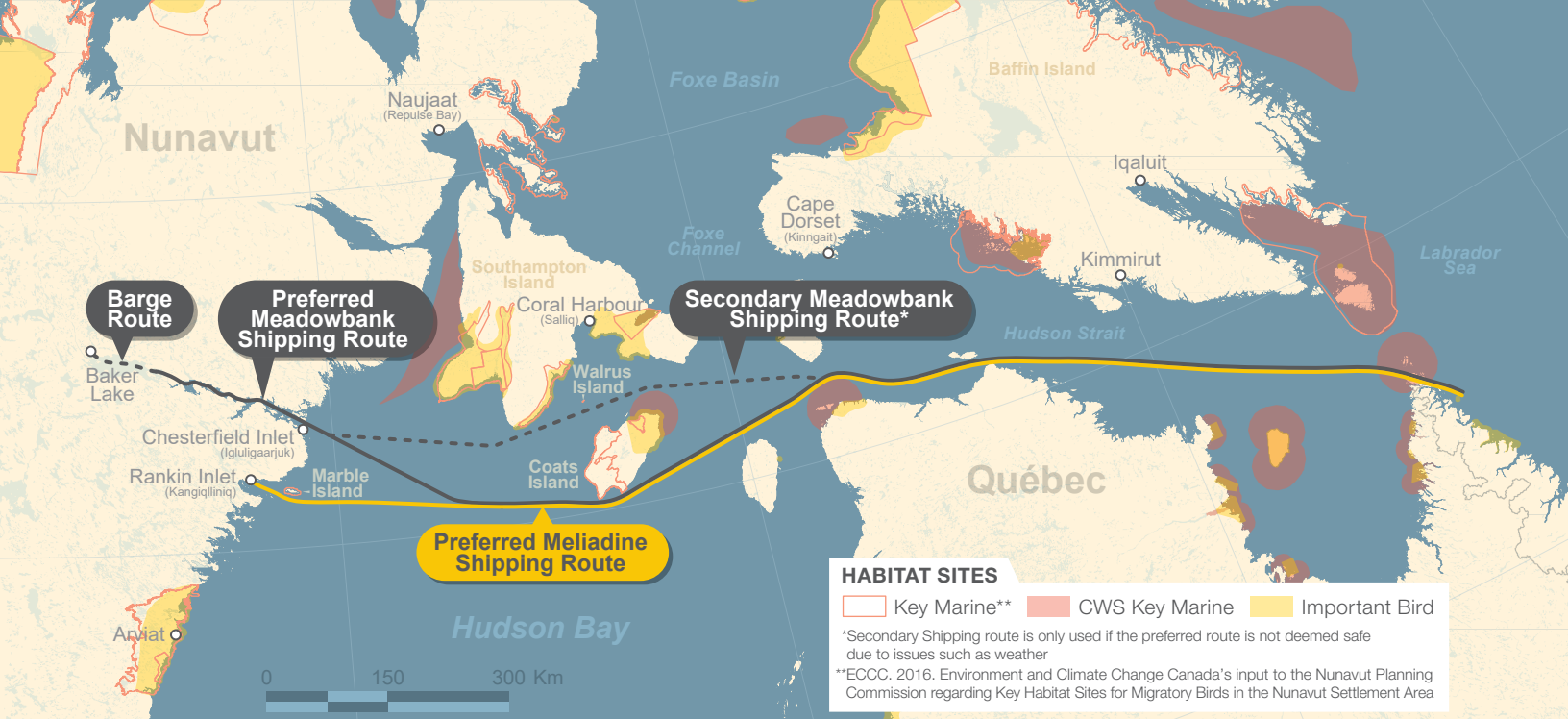


**Avoiding Marine Mammals on Sea Ice**

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 at least 100 m (Meliadine) or 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.

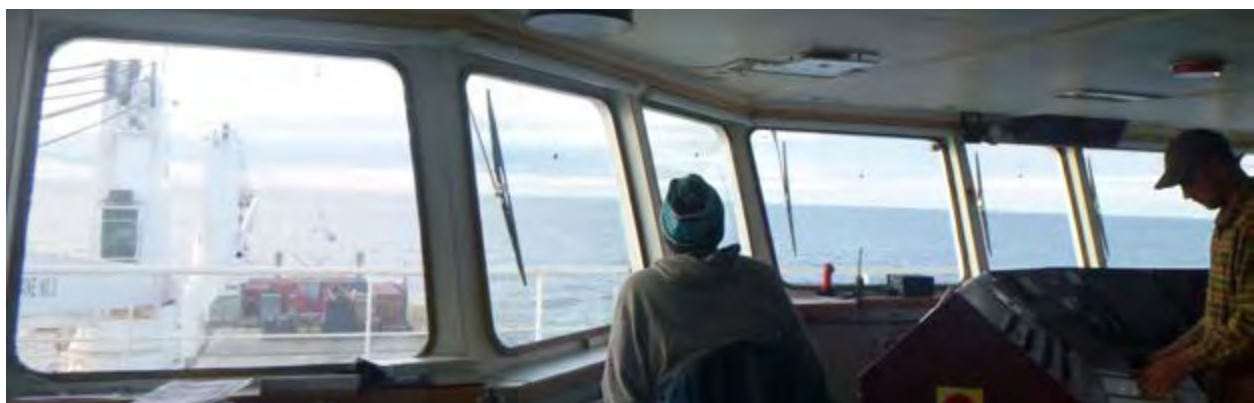
- As part of shipping companies' standard operating procedures, ship crews will monitor for marine mammals and seabirds from Hudson Strait to the lightering point near Helicopter Island (Meadowbank) or Rankin Inlet (Meliadine).
- The ship's Master will be notified if there is a concern of the ship striking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



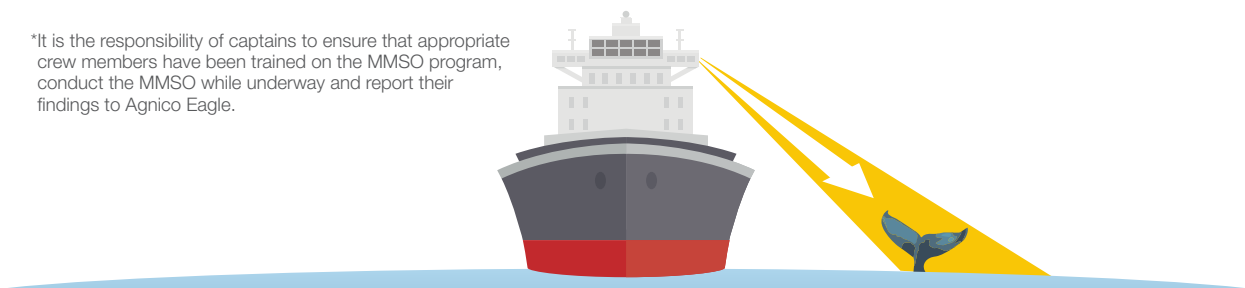




## THE MARINE MAMMAL AND SEABIRD OBSERVATION (MMSO) PROGRAM

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, lasting 30 min each, 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)

### Agnico Eagle Contact:

Sara Savoie, Compliance Counselor: [sara.savoie@agnicoeagle.com](mailto:sara.savoie@agnicoeagle.com)

Marie-Pier Marcil, Senior Compliance Technician: [marie-pier.marcil@agnicoeagle.com](mailto:marie-pier.marcil@agnicoeagle.com)



## IF A COLLISION OCCURS

### Report all collisions to Agnico Eagle:

Robin Allard	Work: +1 (819) 759-3555 x 4606838	Cell: +1 (819) 860-1414
Terry Ternes	Work: +1 (819) 759-3555 x 4603212	Cell: +1 (819) 860-4515



**AGNICO EAGLE**

### 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.

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

CWS, Jean-Francois Dufour: [jean-francois.dufour2@canada.ca](mailto:jean-francois.dufour2@canada.ca)  
ECCC Wildlife Enforcement: [ec.dalfnord-wednorth.ec@canada.ca](mailto:ec.dalfnord-wednorth.ec@canada.ca)







# REFERENCES

**Agnico Eagle (2018a).**

*Agnico Eagle- Meadowbank Division – Shipping Management Plan Version 3. Agnico Eagle.*

**Agnico Eagle (2018b).**

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



## **APPENDIX B      MARINE MAMMAL MONITORING SOP**

## Meadowbank and Meliadine Projects

### Marine Mammal Monitoring

STANDARD OPERATING PROCEDURE

SHIP-01

3 July 2020

Version A.1

**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.

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**ATTACHMENT A MARINE MAMMAL SIGHTINGS FORM**

**ATTACHMENT B MARINE SHIPPING MITIGATION SUMMARY**

**ATTACHMENT C MMSO INCIDENT REPORT FORM**

**ATTACHMENT D 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;
- 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 C).

## 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;
3. *Marine Mammal Sightings Form* (Attachment A);
4. *MMSO Incident Report Form* (Attachment C);
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.

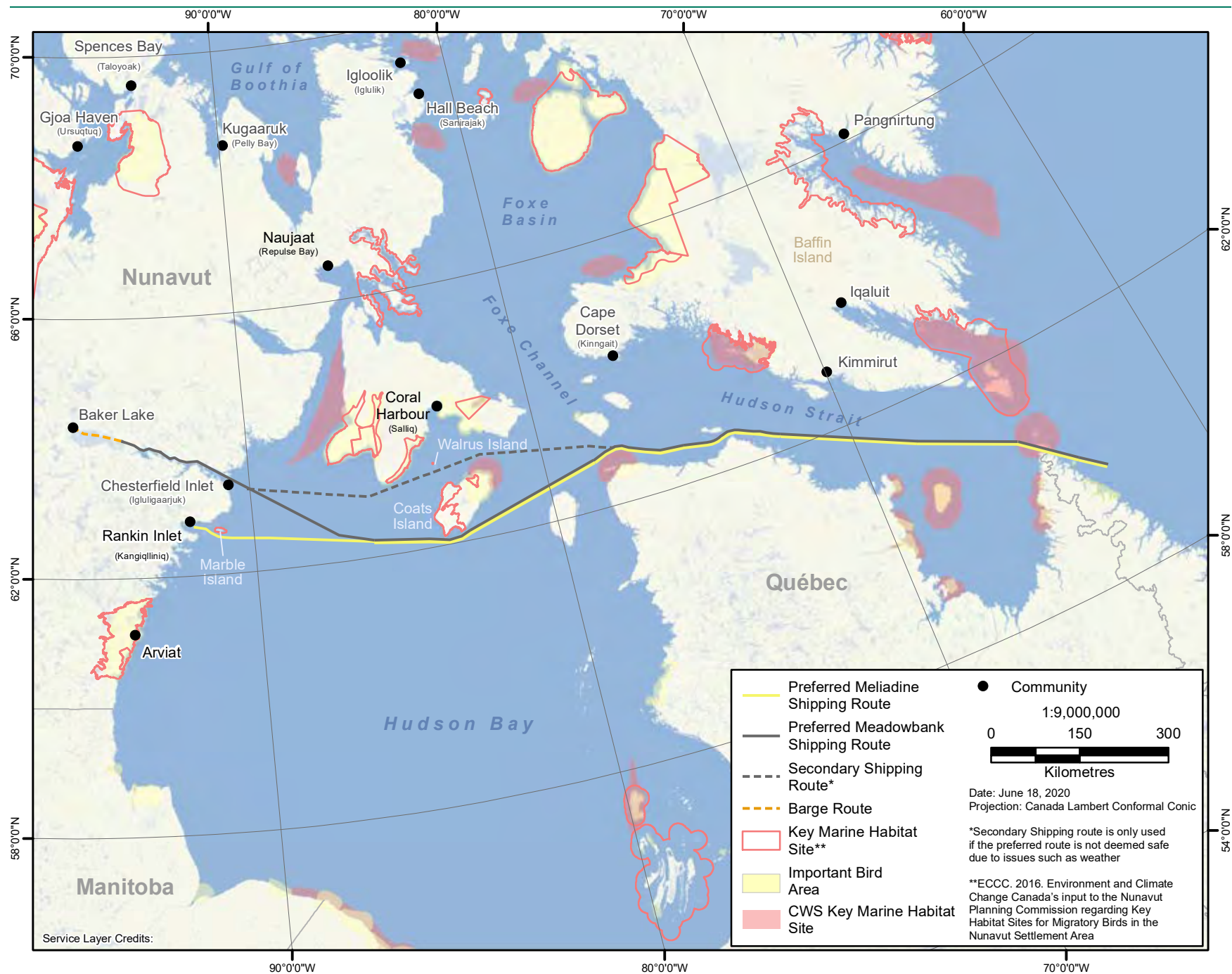
### 2.4.1 Observation Period

- 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 one survey per day; however, two 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*.

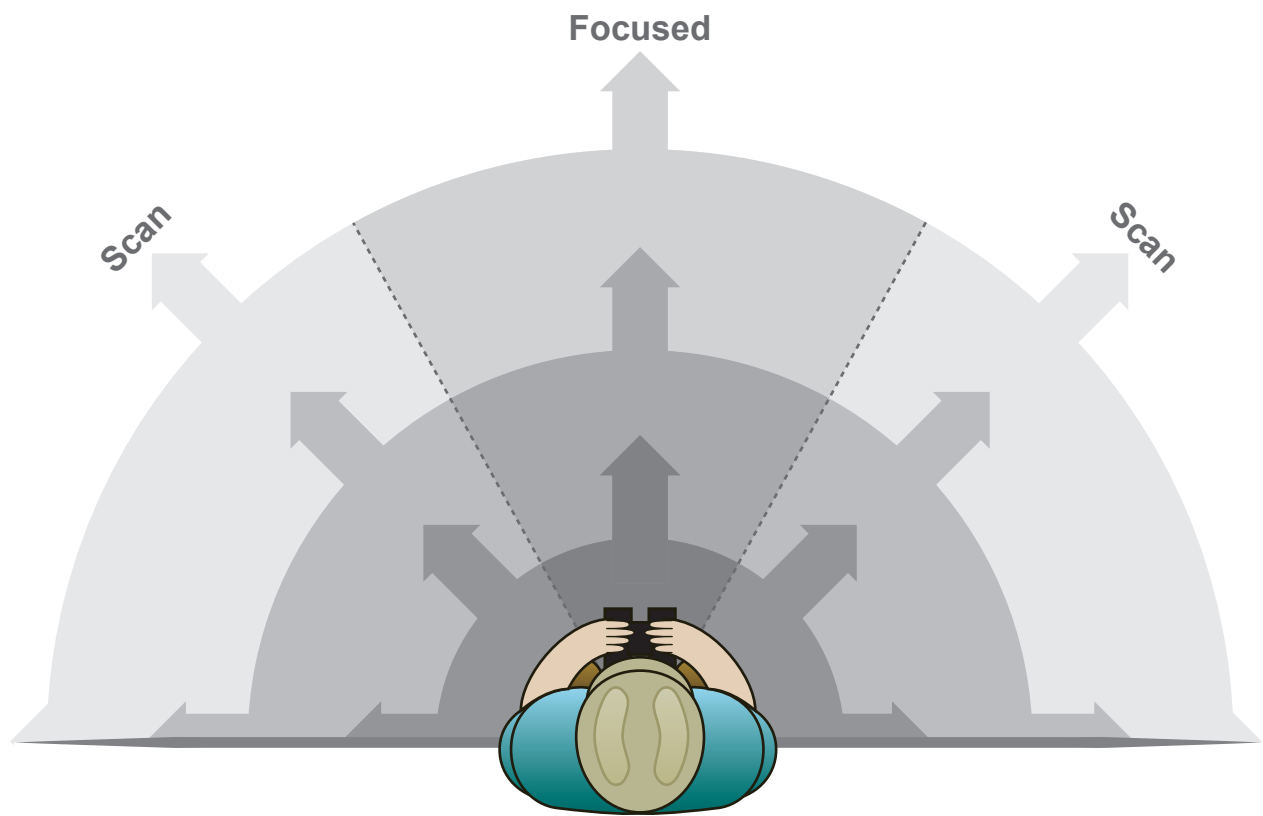
### 2.4.2 Observer Position

- 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**

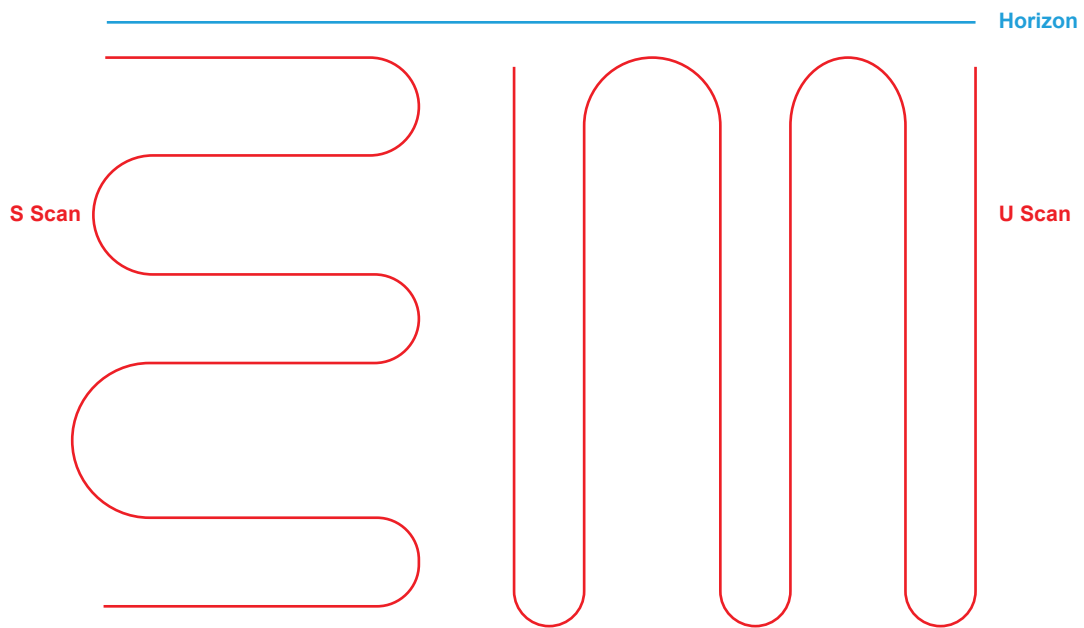
### 2.4.3 Scan Routine

#### 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

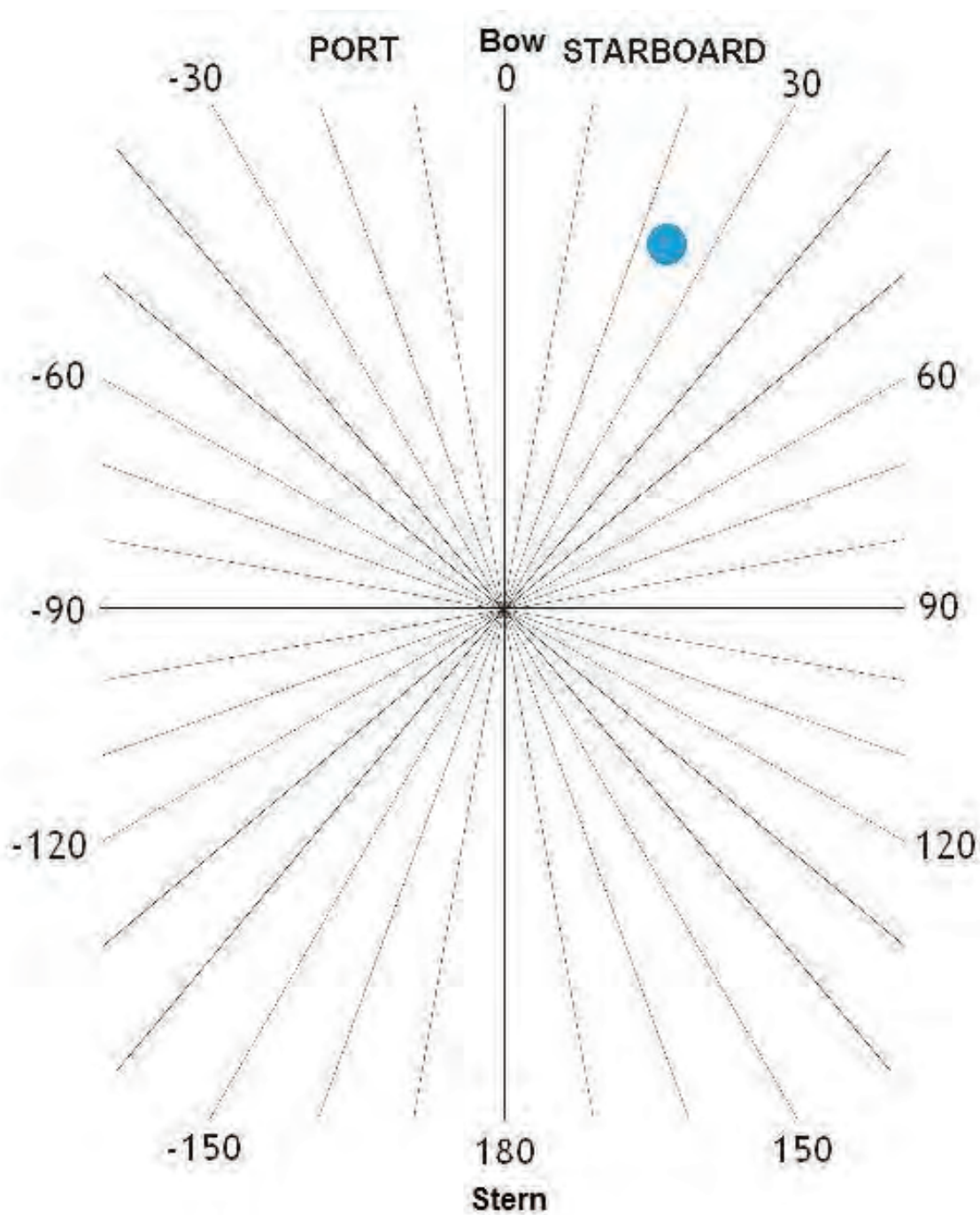
- Marine mammals observed during the dedicated marine mammal observational periods will be recorded on the *Marine Mammal Sightings Form*, including:
  - GPS location;
  - Distance to animal from vessel;
  - Angle to animal (Figure 2.4-4 shows how an angle to a marine mammal from the vessel should be 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 C);
- 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 D) 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 C).

## 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 C). 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. Complete *Incidental Marine Wildlife Sightings Forms*;
4. Completed *MMSO Incident Report Forms* (if required); and
5. 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**



**Marine Mammal Sightings Form** (circle options that are *italicized* as appropriate)[illegible]

## **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 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 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	<b>Mammals:</b> <i>Swimming</i> <i>Diving</i> <i>Feeding</i> <i>Dead</i> <i>Resting on land</i> <i>Resting on ice</i> <i>Other:</i> _____ <b>Birds:</b> <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> <b>Other (describe):</b> _____		
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)		<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

3 July 2020

Version A.1

#### 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.

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**ATTACHMENT A SEABIRD SIGHTINGS FORM**

**ATTACHMENT B MMSO INCIDENT REPORT FORM**

**ATTACHMENT C 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; 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;
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.

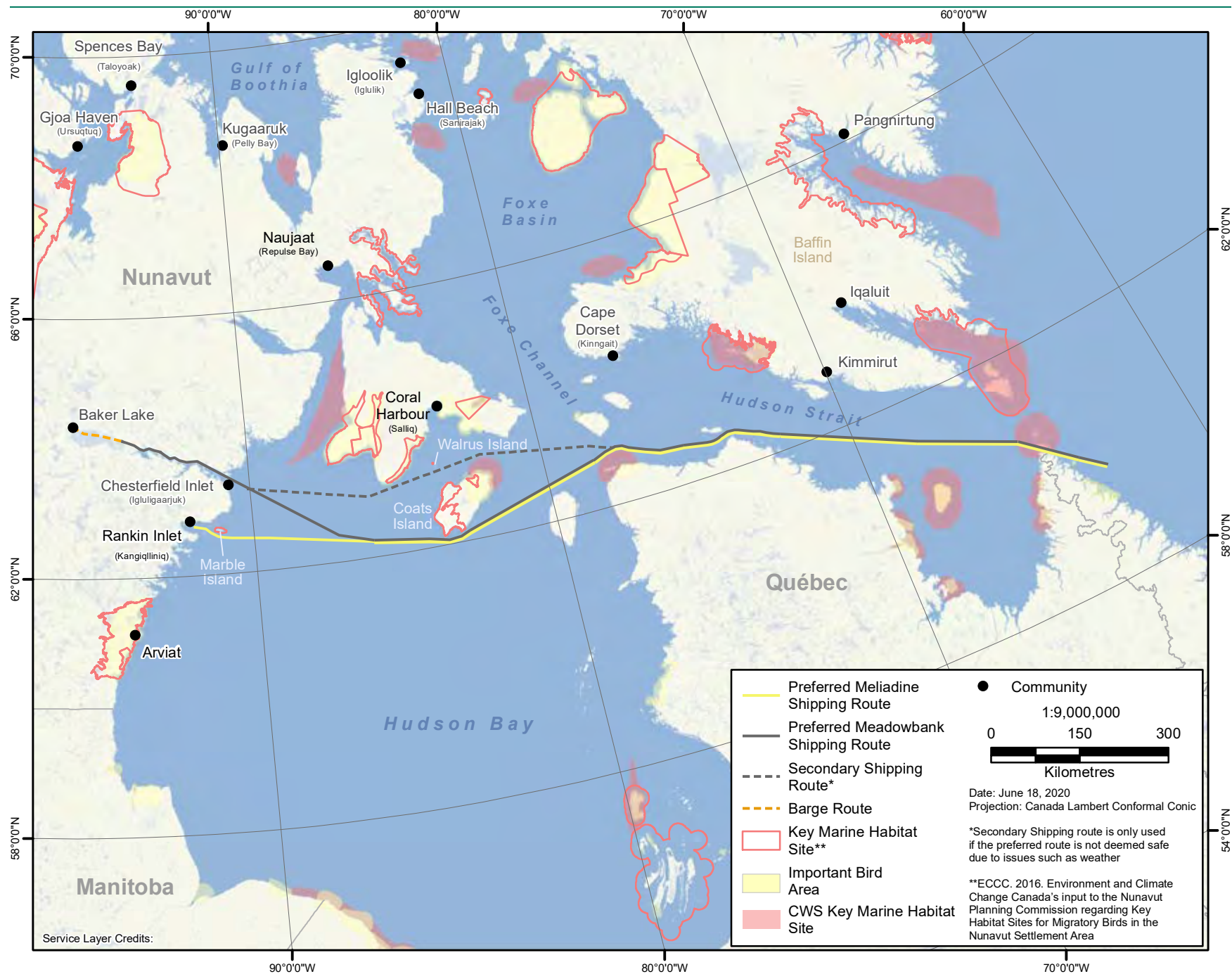
General environmental and seabird sightings information is to be collected and recorded by filling out the *Seabird Sightings Form* (Attachment A). The protocol outlined in this section are best conducted along a transect line, therefore, it is best to start a seabird observation period when the vessel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

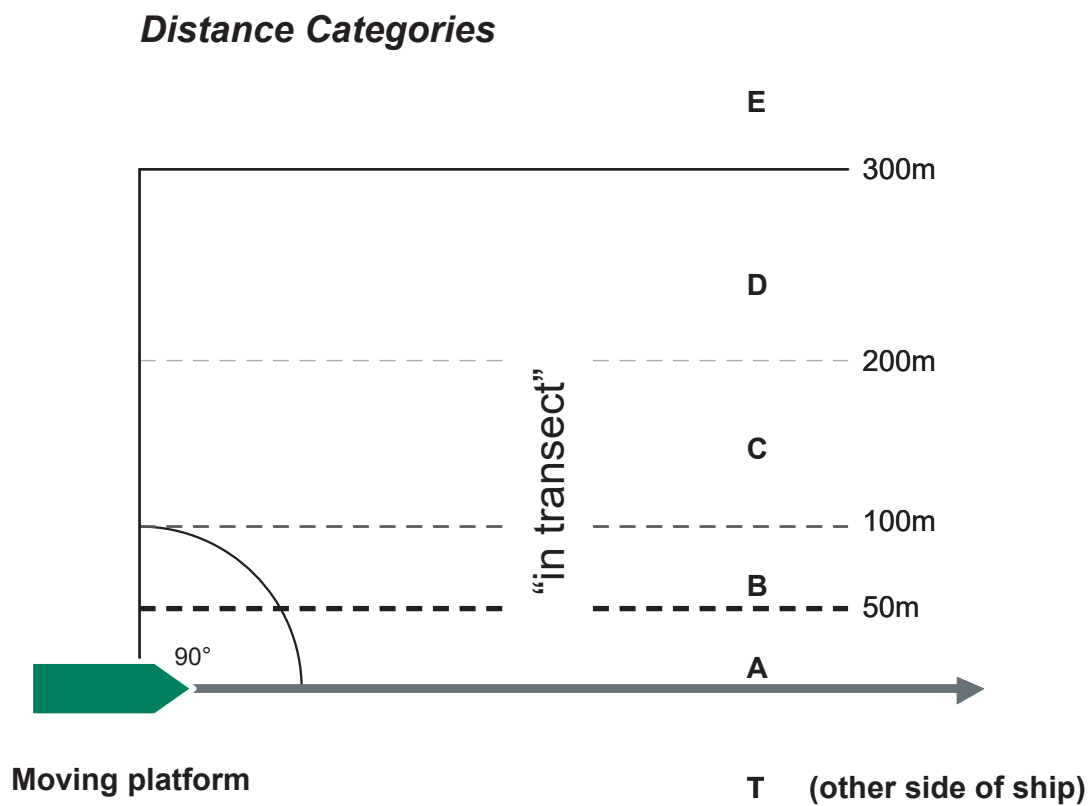
- Look forward from the side of the vessel, scanning at a 90° angle from either the port or starboard side depending where the observer is located.
- The transect width within which seabirds are recorded is 300 m from the side of the vessel (see Figure 2.4-2).
- Begin all five-minute surveys by conducting 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 2.4-2).
- Use Figure 2.4-2 (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 2.4-2 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 (Seabird ID Guide) summarizes general species groups and individual species that are most likely to be observed. 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.

#### 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 Seabird ID Guide (Attachment C), and provide a description of the bird in the comments column of the *Seabird Sightings Form*.

#### Birds in Flight – Snapshot Survey

- All five minute surveys should begin with a quick count (“Snapshot Survey”) of flying birds. Flying birds are not recorded continuously throughout the five-minute survey period as with birds on the water, as this would overestimate bird density.
- Conduct at least five snapshot counts of birds in flight per 30 minute survey (i.e., one prior to each five min survey).
- During each snapshot survey, record the number of flying birds into the *Seabird Sightings Form* and enter in the “Comments” column “snapshot survey”.



*Extracted from Gjerdrum et al. 2012*

**Figure 2.4-2: Illustration of a Seabird Survey Using a 90° Scan, Covering a 300 m Transect from a Moving Platform**

## 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.

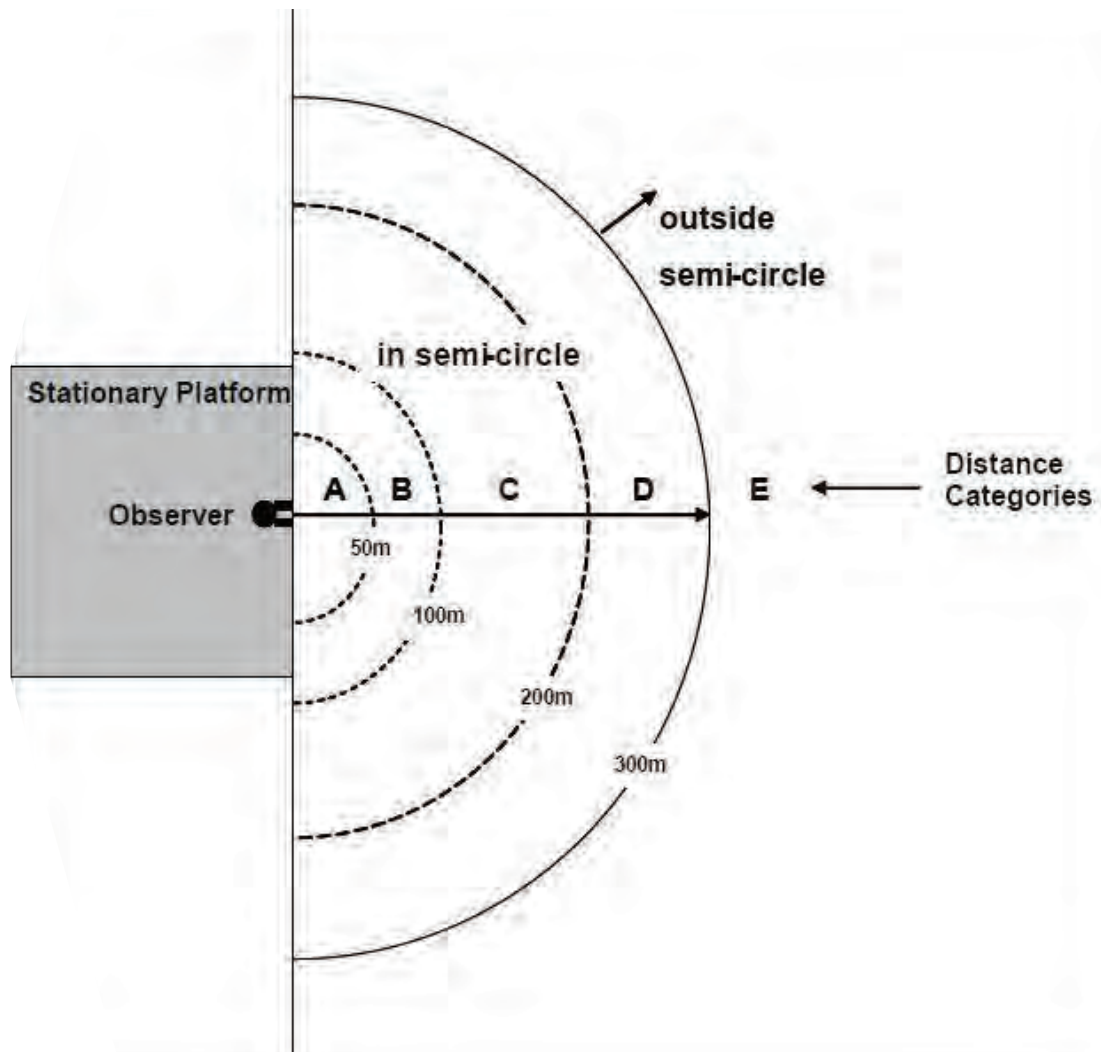
### 2.4.4 Survey Methods – Stationary Vessel

- 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 2.4-3).
- 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 2.4-3 (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*.

## 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 C) 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).



Source: extracted from Gjerdrum et al. 2012

**Figure 2.4-3: Seabird Survey Using an 180° Scan from the Bow, Surveying an Area 300 m from a Stationary Observer**



### 3. MITIGATION AND 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.

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:**

- CWS, Jean-Francois Dufour: [jean-francois.dufour2@Canada.ca](mailto:jean-francois.dufour2@Canada.ca)
- 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. Complete *Incidental Marine Wildlife Sightings Forms*;
4. Completed *MMSO Incident Report Form* (if required); and
5. 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)

Survey Type ( <i>circle one</i> ):										<i>Moving Vessel</i>		<i>Stationary Vessel</i>	
General Information													
Date (DD/MMM/YYYY)				Observer Name				Height of Eye (m)					
Vessel Information													
Company/Agency				Vessel Type				Vessel Heading					
Vessel Name				Vessel Activity		<i>Moving</i> <i>Stationary</i>		Vessel Speed (kt)					
Environmental Information													
Weather		<i>Clear</i> <i>Partly Cloudy</i> <i>100% Cloud</i> <i>Fog</i> <i>Rain</i> <i>Snow</i>		Sea State (0-9)									
Beaufort Wind Force		<i>Calm</i> <i>Light Wind</i> <i>Strong Wind</i> <i>Gale Force Wind</i> <i>Stormy</i>		Wave Height (m)									
Wind Direction (Deg)				Glare Conditions		<i>None</i> <i>Slight Grey</i> <i>Bright</i>		Visibility (km)					
Survey Information													
Transect Start		Local Time (24 hr)				Latitude (DD)				Longitude (DD)			
Transect End		Local Time (24 hr)				Latitude (DD)				Longitude (DD)			
Observer Location		<i>Outdoors</i> <i>Indoors</i>		Observation Side		<i>Starboard</i> <i>Port</i>		<i>Bow</i>					
Notes:													
Seabird Sighting Information													
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/ non-breeding/molt)	Comments*				

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

## **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:
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 C   INCIDENTAL MARINE WILDLIFE SIGHTINGS FORM**



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

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

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

## **APPENDIX D      GROUPE DESGAGNÉS SCANNED DATASHEETS**

Under separate cover

## **APPENDIX E      MARINE MAMMAL SURVEY DATA AND SIGHTINGS INFORMATION 2020**



Appendix E: Marine Mammal Survey Data and Sightings Information, 2020

Survey ID	Date	Platform Name and Type	Company/Agency	Observer(s)	Survey Type	Incidental?	Time at Start	Time at End	Effort	Survey Start		Survey End		Platform Activity	Visibility (km)
										Latitude	Longitude	Latitude	Longitude		
3	2020-06-29	Nordika Desgagnés/ Cargo	Desgagnés/Transarctik	Mélina Jobin, Paul Pye	Transect	Yes	13:42:01	13:55:00	00:13:00	61°13.0' N	-63°51.4' E			Moving	20
4	2020-06-30	Nordika Desgagnés/ Cargo	Desgagnés/Transarctik	Mélina Jobin	Transect	Yes	08:50:00	09:50:01	01:00:01	61°6.6' N	-64°14.8' E			Moving	10
5	2020-07-02	Nordika Desgagnés/ Cargo	Desgagnés/Transarctik	Mélina Jobin, Paul Pye	Transect	Yes	01:30:00	02:00:01	00:30:01	61°18.4' N	-65°30.8' E			Moving	20
6	2020-07-22	Tuvaq W./ Tanker	Coastal Shipping	Andrew Gillyh	Transect	Yes	12:17:00	12:20:00	00:03:01	63°59.6' N	-94°14.5' E			Moving	12
7	2020-08-23	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	No	10:35:01	12:05:01	01:30:00	60°41.6' N	-65°44.2' E	60°52.2' N	-66°15.3' E	Moving	50
8	2020-08-24	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	Yes	10:30:00			62°34.7' N	-75°27.3' E			Moving	5
9	2020-08-25	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	No	10:30:00	12:00:00	01:30:00	62°16.6' N	-86°42.9' E	62°20.0' N	-87°24.6' E	Moving	30
10	2020-09-10	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	No	18:35:00	20:05:00	01:30:00	62°30.8' N	-73°36.8' E	62°26.6' N	-72°58.4' E	Moving	10
11	2020-09-11	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	No	18:33:00	20:03:00	01:30:00	60°8.7' N	-63°42.9' E	59°51.8' N	-63°20.4' E	Moving	5
12	2020-09-12	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	13:00:00	15:20:00	02:20:01	61°2.8' N	-64°44.9' E	61°18.7' N	-65°47.2' E	Moving	4
13	2020-09-13	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:10:01	15:00:00	02:50:00	62°50.2' N	-75°14.3' E	62°53.4' N	-76°34.5' E	Moving	10
14	2020-09-14	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:55:01	15:20:00	02:25:00	62°49.0' N	-87°10.0' E	62°44.7' N	-88°19.0' E	Moving	10
15	2020-08-15	Zelada Desgagnés/ Cargo	Desgagnés	Valerie Caron	Transect	No	17:00:01	20:00:01	03:00:00	61°23.0' N	-68°27.0' E	61°32.0' N	-69°3.0' E	Moving	7
16	2020-09-15	Zelada Desgagnés/ Cargo	Desgagnés	Marc-Antoine L'heureux	Stationary	No	12:00:00	14:00:01	02:00:01	62°46.7' N	-92°5.3' E	62°46.7' N	-92°5.3' E	Stationary	10
17	2020-08-16	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:00:00	15:00:00	03:00:00	61°13.6' N	-69°46.1' E	61°43.6' N	-70°7.5' E	Moving	15
18	2020-09-16	Zelada Desgagnés/ Cargo	Desgagnés	Marc-Antoine L'heureux	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.5' N	-93°38.7' E	63°56.5' N	-93°38.7' E	Stationary	10
19	2020-08-17	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Stationary	No	12:00:00	16:00:00	04:00:00	67°7.7' N	-67°7.7' E	67°7.7' N	-67°7.7' E	Stationary	6
20	2020-09-17	Zelada Desgagnés/ Cargo	Desgagnés	Marc-Antoine L'heureux	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.5' N	-93°38.7' E	63°56.5' N	-93°38.7' E	Stationary	10
21	2020-08-02	Claude A Desgagnés/ Cargo	Desgagnés	Alexandre Vézina	Transect	No	12:00:00	14:00:01	02:00:01	62°45.2' N	-92°2.4' E	62°34.8' N	-90°41.0' E	Moving	20
22	2020-07-17	Claude A Desgagnés/ Cargo	Desgagnés	Daniel Mingorane- Gerable	Transect	No	13:00:00	15:00:00	02:00:01	61°54.4' N	-70°42.9' E			Moving	5
23	2020-07-18	Claude A Desgagnés/ Cargo	Desgagnés	Alexandre Vézina	Transect	No	12:24:00	14:24:00	02:00:01	62°39.3' N	-79°13.9' E	62°36.0' N	-80°15.6' E	Moving	2
24	2020-07-19	Claude A Desgagnés/ Cargo	Desgagnés	Daniel Mingorane- Gerable	Transect	No	14:00:01	16:00:00	02:00:00	62°41.5' N	-90°47.7' E	63°4.4' N	-90°20.0' E	Moving	10
25	2020-10-01	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°57.0' N	-93°35.0' E	63°57.0' N	-93°35.0' E	Stationary	20
26	2020-10-02	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°57.0' N	-93°34.6' E	63°57.0' N	-93°34.6' E	Stationary	20
27	2020-10-03	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°57.0' N	-93°35.1' E	63°57.0' N	-93°35.1' E	Stationary	15
28	2020-10-04	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°57.0' N	-93°35.0' E	63°57.0' N	-93°35.0' E	Stationary	20
29	2020-10-05	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	03:00:00	04:00:00	01:00:00	63°57.0' N	-93°34.8' E	63°57.0' N	-93°34.8' E	Stationary	15
30	2020-10-06	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	Yes				62°46.6' N	-92°5.7' E	62°46.6' N	-92°5.7' E	Stationary	15
31	2020-10-07	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°31.0' N	-91°4.7' E	63°31.0' N	-91°4.7' E	Stationary	15
32	2020-10-08	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°31.0' N	-91°4.6' E	63°31.0' N	-91°4.6' E	Stationary	15
33	2020-10-09	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°31.0' N	-91°4.8' E	63°31.0' N	-91°4.8' E	Stationary	10
34	2020-10-10	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°31.0' N	-91°4.8' E	63°31.0' N	-91°4.8' E	Stationary	15
35	2020-10-11	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Transect	No	09:00:00	10:00:00	01:00:00	61°59.8' N	-84°21.7' E	61°55.1' N	-83°53.3' E	Moving	15
36	2020-10-12	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Transect	No	08:00:01	09:00:00	01:00:00	62°30.6' N	-73°6.1' E	62°24.6' N	-72°32.5' E	Moving	15
37	2020-09-21	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Transect	No	09:00:00	10:00:00	01:00:00	60°26.7' N	-64°14.1' E	60°31.6' N	-64°39.5' E	Moving	10
38	2020-09-22	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	21:00:00	22:00:00	01:00:00	62°11.9' N	-75°43.5' E	62°11.9' N	-75°43.5' E	Stationary	10
39	2020-09-23	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	09:00:00	10:00:00	01:00:00	62°12.2' N	-75°43.2' E	62°12.2' N	-75°43.2' E	Stationary	15
40	2020-09-24	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	09:00:00	10:00:00	01:00:00	62°11.9' N	-75°43.5' E	62°11.9' N	-75°43.5' E	Stationary	12
41	2020-09-25	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Transect	No	09:00:00	10:00:00	01:00:00	63°7.7' N	-82°33.0' E	63°7.0' N	-83°4.9' E	Moving	35
42	2020-09-26	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	08:00:01	09:00:00	01:00:00	62°45.3' N	-92°5.7' E	62°45.3' N	-92°5.4' E	Stationary	15
43	2020-09-27	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Transect	No	21:00:00	22:00:00	01:00:00	62°37.0' N	-90°51.6' E	62°47.1' N	-90°36.4' E	Moving	20
44	2020-09-28	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	22:00:00	23:00:01	01:00:01	63°57.2' N	-93°34.8' E	63°57.2' N	-93°34.8' E	Stationary	20
45	2020-09-29	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	05:00:01	06:00:00	01:00:00	63°57.1' N	-93°34.9' E	63°57.1' N	-93°34.9' E	Stationary	10
46	2020-09-30	Nordika Desgagnés/ Cargo	Transarctik	Mélina Jobin	Stationary	No	12:00:00	13:00:00	01:00:00	63°57.0' N	-93°35.0' E	63°57.0' N	-93°35.0' E	Stationary	15
47	2020-08-18	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Stationary	No	12:00:00	16:00:00	04:00:00	67°7.7' N	-74°37.6' E	67°7.7' N	-74°37.6' E	Stationary	4
48	2020-09-18	Zelada Desgagnés/ Cargo	Desgagnés	Marc-Antoine L'heureux	Stationary	No	12:00:00	14:00:01	02:00:01	62°47.7' N	-92°5.9' E	62°47.7' N	-92°5.9' E	Stationary	10
49	2020-08-19	Zelada Desgagnés/ Cargo	Desgagnés	Blake Loveys	Transect	No	18:00:00	20:00:01	02:00:01	62°13.0' N	-74°46.0' E			Moving	10

Appendix E: Marine Mammal Survey Data and Sightings Information, 2020

Survey ID	Date	Platform Name and Type	Weather Notes	Glare Condition Notes	Sea State Code	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	True Platform Direction (deg)	Observation Side	Height of Eye (m)	Outdoors or Indoors	Species	Count
3	2020-06-29	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	1	1	Light Wind		3.5	250	Starboard	30	Outdoors	Polar Bear	1
4	2020-06-30	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	0	0	Light Wind		0.8	87	Starboard	30	Outdoors	Polar Bear	1
5	2020-07-02	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	0	0	Light Wind	290	6.8	282	Starboard	30	Indoors	Unknown Seal	1
6	2020-07-22	Tuvaq W./ Tanker	Clear	None/bright			Calm		5		Starboard	30	Indoors	Muskox	1
7	2020-08-23	Sedna Desgagnés/ Cargo	Clear	None/bright	2	1	Light Wind	115	12.1	298	Starboard	30	Indoors	No Observations	-
8	2020-08-24	Sedna Desgagnés/ Cargo	Rain	Slight/grey	1	1	Light Wind	30	12.1	274	Starboard	30	Outdoors	No Observations	-
9	2020-08-25	Sedna Desgagnés/ Cargo	Partly Cloudy	None/bright	2	1	Strong Wind	60	13.7	279	Starboard	30	Outdoors	No Observations	-
10	2020-09-10	Sedna Desgagnés/ Cargo	Partly Cloudy	Slight/grey	3	1	Strong Wind	190	13.3	90	Port	30	Indoors	No Observations	-
11	2020-09-11	Sedna Desgagnés/ Cargo	100% Cloud	Slight/grey	4	2	Strong Wind	190	13.9	143	Starboard	30	Indoors	No Observations	-
12	2020-09-12	Zelada Desgagnés/ Cargo	Fog	None/bright	3	1	Strong Wind	45	13	316	Starboard and Port	26	Indoors	No Observations	-
13	2020-09-13	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	4	1	Strong Wind	90	13	275	Starboard and Port	26	Indoors	No Observations	-
14	2020-09-14	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	4	1	Strong Wind	315	13.5	262	Starboard and Port	26	Indoors	No Observations	-
15	2020-08-15	Zelada Desgagnés/ Cargo	100% Cloud	None/bright	2	1	Light Wind	135	14	294	Starboard	12	Indoors	White-beaked Dolphin (2 observations)	(6,15)
16	2020-09-15	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	2	1	Strong Wind	225	0		Starboard	26	Indoors	No Observations	-
17	2020-08-16	Zelada Desgagnés/ Cargo	Partly Cloudy	None/bright	4	1	Light Wind	180	10	342	Starboard	12	Indoors	No Observations	-
18	2020-09-16	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	3	1	Strong Wind	0	0		Starboard	26	Indoors	No Observations	-
19	2020-08-17	Zelada Desgagnés/ Cargo	Rain	Slight/grey	1	1	Light Wind		0		Starboard	13	Both	No Observations	-
20	2020-09-17	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	3	1	Strong Wind	315	0		Starboard	26	Indoors	No Observations	-
21	2020-08-02	Claude A Desgagnés/ Cargo	Clear	None/bright	1	1	Light Wind	0	5.2	0	Port	20	Indoors	Unknown Seal	2
22	2020-07-17	Claude A Desgagnés/ Cargo	100% Cloud	Slight/grey	1	1	Light Wind	90	13.7	310	Middle	20	Outdoors	No Observations	-
23	2020-07-18	Claude A Desgagnés/ Cargo	Fog	Slight/grey	1	1	Light Wind	45	14.3	265	Port	20	Outdoors	No Observations	-
24	2020-07-19	Claude A Desgagnés/ Cargo	Partly Cloudy	None/bright	1	1	Light Wind	0	13.6	35	Middle	20	Outdoors	Polar Bear (mother and 2 cubs)	3
25	2020-10-01	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	1	0	Light Wind	325	0	293	Starboard	33	Indoors	No Observations	-
26	2020-10-02	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	1	0	Light Wind	318	0	275	Starboard	33	Indoors	No Observations	-
27	2020-10-03	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	2	0	Light Wind	320	0	305	Starboard	33	Indoors	No Observations	-
28	2020-10-04	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	2	0	Calm	42	0	12	Starboard	33	Indoors	No Observations	-
29	2020-10-05	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	1	0	Light Wind	45	0	31	Starboard	33	Indoors	No Observations	-
30	2020-10-06	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	2	0	Strong Wind	180	0	326	Starboard	33	Indoors	No Observations	-
31	2020-10-07	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	4	2	Gale Force Wind	180	0	314	Starboard	33	Indoors	No Observations	-
32	2020-10-08	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	2	0	Strong Wind	190	0	3	Starboard	33	Indoors	No Observations	-
33	2020-10-09	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	1	0	Light Wind	135	0	84	Starboard	33	Indoors	No Observations	-
34	2020-10-10	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	1	0	Light Wind	135	0	27	Starboard	33	Indoors	No Observations	-
35	2020-10-11	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	2	0	Strong Wind	135	14.2	114	Starboard	33	Indoors	No Observations	-
36	2020-10-12	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	3	0	Light Wind	90	14.8	116	Starboard	33	Indoors	No Observations	-
37	2020-09-21	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	3	1	Strong Wind	203	10.9	302	Starboard	33	Indoors	No Observations	-
38	2020-09-22	Nordika Desgagnés/ Cargo	Rain	None/bright	3	1	Strong Wind	45	0	25	Starboard	33	Indoors	No Observations	-
39	2020-09-23	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	2	0.5	Light Wind	48	0	36	Starboard	33	Indoors	No Observations	-
40	2020-09-24	Nordika Desgagnés/ Cargo	Rain	None/bright	2	0.5	Strong Wind	42	0	21	Starboard	33	Indoors	No Observations	-
41	2020-09-25	Nordika Desgagnés/ Cargo	Clear	None/bright	3	1	Strong Wind	180	13.3	269	Starboard	33	Indoors	No Observations	-
42	2020-09-26	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	4	2	Strong Wind	72	0	80	Starboard	33	Indoors	No Observations	-
43	2020-09-27	Nordika Desgagnés/ Cargo	Clear	None/bright	5	2	Strong Wind	45	12.9	90	Starboard	33	Indoors	No Observations	-
44	2020-09-28	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	1	0	Light Wind	312	0	151	Starboard	33	Indoors	No Observations	-
45	2020-09-29	Nordika Desgagnés/ Cargo	100% Cloud	None/bright	3	1	Strong Wind	270	0	88	Starboard	33	Indoors	No Observations	-
46	2020-09-30	Nordika Desgagnés/ Cargo	Partly Cloudy	None/bright	2	0	Light Wind	220	0	303	Starboard	33	Indoors	No Observations	-
47	2020-08-18	Zelada Desgagnés/ Cargo	Fog	Slight/grey	1	1	Light Wind	315	0		Starboard	13	Both	No Observations	-
48	2020-09-18	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	1	1	Light Wind	270	0		Starboard	26	Indoors	No Observations	-
49	2020-08-19	Zelada Desgagnés/ Cargo	Partly Cloudy	None/bright	2	1	Light Wind	300	14	288	Bow	12	Indoors	No Observations	-

Appendix E: Marine Mammal Survey Data and Sightings Information, 2020

Survey ID	Date	Platform Name and Type	Company/Agency	Observer(s)	Survey Type	Incidental?	Time at Start	Time at End	Effort	Survey Start		Survey End		Platform Activity	Visibility (km)
										Latitude	Longitude	Latitude	Longitude		
50	2020-09-19	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Stationary	No	12:00:00	15:00:00	03:00:00	62°47.8' N	-92°6.0' E	62°47.8' N	-92°6.0' E	Stationary	10
51	2020-08-20	Zelada Desgagnés/ Cargo	Desgagnés	Simon Desgagnés	Transect	No	15:15:00	16:00:00	00:45:00	62°2.0' N	-84°9.8' E	62°4.0' N	-84°30.2' E	Moving	10
52	2020-09-20	Zelada Desgagnés/ Cargo	Desgagnés	Marc-Antoine L'heureux	Stationary	No	12:00:00	14:00:01	02:00:01	63°30.9' N	-91°4.1' E	63°30.9' N	-91°4.1' E	Stationary	10
53	2020-08-21	Zelada Desgagnés/ Cargo	Desgagnés	Blake Loveys	Transect	No	08:00:01	09:00:00	01:00:00	62°42.0' N	-91°38.8' E	62°44.4' N	-91°58.8' E	Moving	9
54	2020-09-21	Zelada Desgagnés/ Cargo	Desgagnés	Marc-Antoine L'heureux	Stationary	No	12:00:00	14:00:01	02:00:01	63°31.0' N	-91°4.8' E	63°31.0' N	-91°4.8' E	Stationary	10
55	2020-08-22	Zelada Desgagnés/ Cargo	Desgagnés	Blake Loveys	Stationary	No	12:00:00	13:00:00	01:00:00	62°46.6' N	-92°5.7' E	62°46.6' N	-92°5.7' E	Stationary	10
56	2020-09-22	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Stationary	No	12:00:00	15:00:00	03:00:00	62°46.5' N	-92°5.9' E	62°46.5' N	-92°5.9' E	Stationary	10
57	2020-08-23	Zelada Desgagnés/ Cargo	Desgagnés	Blake Loveys	Stationary	No	12:00:00	13:00:00	01:00:00	62°46.6' N	-92°5.7' E	62°46.6' N	-92°5.7' E	Stationary	10
58	2020-09-23	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Stationary	No	12:00:00	15:30:01	03:30:01	62°46.5' N	-92°5.7' E	62°46.5' N	-92°5.7' E	Stationary	10
59	2020-08-24	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:00:00	14:30:00	02:30:00	62°33.6' N	-90°32.2' E	62°27.3' N	-89°16.2' E	Moving	15
60	2020-09-24	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:00:00	15:05:01	03:05:01	62°40.2' N	-89°31.0' E	62°46.0' N	-88°0.0' E	Moving	10
61	2020-08-25	Zelada Desgagnés/ Cargo	Desgagnés	Simon Desgagnés	Transect	No	12:00:00	13:00:00	01:00:00	62°32.5' N	-73°19.3' E	62°30.9' N	-73°2.1' E	Moving	1
62	2020-09-25	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:00:00	15:00:00	03:00:00	62°56.0' N	-77°24.0' E	62°51.0' N	-75°49.0' E	Moving	10
63	2020-08-26	Zelada Desgagnés/ Cargo	Desgagnés	Simon Desgagnés	Transect	No	13:20:00	14:00:01	00:40:01	62°30.9' N	-73°51.3' E	62°31.2' N	-73°41.3' E	Moving	1
64	2020-09-26	Zelada Desgagnés/ Cargo	Desgagnés	Philippe Morin	Transect	No	12:15:00	15:00:00	02:45:01	61°28.0' N	-65°46.0' E	61°7.0' N	-64°54.0' E	Moving	15
65	2020-08-27	Zelada Desgagnés/ Cargo	Desgagnés	Valerie Caron	Transect	No	16:00:00	18:00:00	02:00:01	61°22.0' N	-67°30.0' E	61°15.0' N	-66°56.0' E	Moving	10
66	2020-09-29	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	No	10:30:00	12:00:00	01:30:00	61°8.5' N	-67°24.0' E	61°17.2' N	-68°0.3' E	Moving	10
67	2020-10-21	Sedna Desgagnés/ Cargo	Desgagnés/Transarctik	Catherine Héту	Transect	No	10:00:00	11:25:01	01:25:01	62°17.3' N	-82°22.9' E	62°29.9' N	-81°46.4' E	Moving	10
1033	2020-09-19	Dara Desgagnés/ Oil tanker	Rigel Shipping	Rishabh N Sharma	Transect	No	06:30:01	08:00:01	01:30:00	61°30.4' N	-66°32.4' E	61°37.2' N	-67°12.9' E	Moving	10
1043	2020-09-20	Dara Desgagnés/ Oil tanker	Rigel Shipping	Rishabh N Sharma	Transect	No	06:00:00	07:30:00	01:30:00	62°40.6' N	-77°4.5' E	62°42.0' N	-77°37.2' E	Moving	10
1044	2020-09-21	Dara Desgagnés/ Oil tanker	Rigel Shipping	Rishabh N Sharma	Transect	No	06:00:00	07:45:00	01:45:00	62°32.7' N	-86°29.3' E	62°41.6' N	-87°17.2' E	Moving	10
1045	2020-09-22	Dara Desgagnés/ Oil tanker	Rigel Shipping	Rishabh N Sharma	Stationary	No	06:30:01	08:00:01	01:30:00	63°18.5' N	-90°38.1' E			Stationary	10
1046	2020-09-28	Dara Desgagnés/ Oil tanker	Rigel Shipping	Rishabh N Sharma	Stationary	No	06:30:01	08:00:01	01:30:00	63°57.4' N	-93°33.9' E			Stationary	10
1047	2020-08-11	Kivalliq/ Chemical tanker	Coastal Shipping (Petro-Nav	Curtis Buckmaster	Stationary	No	12:00:00	16:00:00	04:00:00	64°7.4' N	-94°21.5' E	64°7.4' N	-94°21.5' E	Stationary	30
1068	2020-10-09	Maria Desgagnés/ Tanker	Rigel/PNI	M Flynn	Transect	Yes								Moving	
1069	2020-09-01	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	15:30:01	01:30:00	60°48.6' N	-64°47.1' E	60°55.4' N	-65°20.1' E	Moving	15
1101	2020-09-02	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	15:30:01	01:30:00	62°35.0' N	-76°15.0' E	62°36.6' N	-76°51.1' E	Moving	15
1102	2020-09-03	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	15:35:00	01:35:00	62°21.7' N	-85°34.6' E	62°29.7' N	-86°16.1' E	Moving	12
1103	2020-09-04	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	15:30:01	01:30:00	63°32.7' N	-91°2.6' E	63°37.8' N	-91°31.7' E	Moving	12
1104	2020-09-08	Miena Desgagnés/ Multi purpose	Desgagnés	I. Oxford	Transect	No	13:00:00	14:30:00	01:30:00	63°25.4' N	-90°45.7' E	63°17.0' N	-90°28.2' E	Moving	10
1105	2020-09-09	Miena Desgagnés/ Multi purpose	Desgagnés	I. Oxford	Stationary	No	11:00:01	12:30:01	01:30:00	62°45.2' N	-90°4.2' E	62°45.2' N	-90°4.2' E	Stationary	5
1106	2020-09-10	Miena Desgagnés/ Multi Purpose	Desgagnés	I. Oxford	Stationary	No	08:00:01	09:30:01	01:30:00	62°46.5' N	-92°5.6' E	62°46.5' N	-92°5.6' E	Stationary	6
1107	2020-09-11	Miena Desgagnés/ Multi purpose	Desgagnés	I. Oxford	Stationary	No	08:00:01	09:30:01	01:30:00	62°46.6' N	-92°5.6' E	62°46.6' N	-92°5.6' E	Stationary	10
1108	2020-09-12	Miena Desgagnés/ Multi purpose	Desgagnés	I. Oxford	Stationary	No	08:00:01	09:00:00	01:00:00	62°46.6' N	-92°5.9' E	62°46.6' N	-92°5.9' E	Stationary	10
1109	2020-09-13	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	15:45:00	01:45:00	62°2.5' N	-89°10.4' E	62°23.5' N	-88°24.4' E	Moving	10
1110	2020-09-14	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	15:30:01	01:30:00	62°25.1' N	-80°7.2' E	62°27.3' N	-79°49.5' E	Moving	10
1111	2020-09-15	Miena Desgagnés/ Multi purpose	Desgagnés	Alexandre Lamarre	Transect	No	14:00:01	16:00:00	02:00:00	61°50.3' N	-69°57.6' E	61°42.7' N	-69°16.2' E	Moving	10
1126	2020-08-05	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Mélina Jobin	Transect	No	08:30:00	10:00:00	01:30:00	60°50.7' N	-64°55.2' E	60°53.9' N	-65°33.6' E	Moving	10
1127	2020-08-06	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Mélina Jobin	Transect	No	20:00:01	21:00:00	01:00:00	62°39.6' N	-80°24.5' E	62°32.6' N	-80°47.9' E	Moving	1
1128	2020-08-08	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	12:00:00	13:00:00	01:00:00	62°45.9' N	-92°4.0' E	62°45.9' N	-92°3.7' E	Stationary	10
1129	2020-08-09	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	12:00:00	13:00:00	01:00:00	63°57.0' N	-93°35.0' E	63°57.0' N	-93°35.2' E	Stationary	10
1130	2020-08-10	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	12:00:00	13:00:00	01:00:00	64°57.0' N	-93°35.3' E	63°57.0' N	-93°35.3' E	Stationary	10
1131	2020-08-11	General Cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	15:00:00	16:00:00	01:00:00	63°57.0' N	-93°35.3' E	63°57.1' N	-93°35.0' E	Stationary	10
1132	2020-08-12	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	13:00:00	14:00:01	01:00:01	63°56.9' N	-93°35.1' E	63°56.9' N	-93°35.1' E	Stationary	10
1133	2020-08-13	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	15:00:00	16:00:00	01:00:00	63°57.1' N	-93°35.2' E	63°57.1' N	-93°35.3' E	Stationary	10
1134	2020-08-14	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	13:00:00	15:00:00	02:00:01	63°57.1' N	-93°35.2' E	63°57.1' N	-93°35.2' E	Stationary	5
1135	2020-08-15	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Transect	Yes								Moving	
1136	2020-08-16	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	12:00:00	14:00:01	02:00:01	62°46.5' N	-92°5.5' E	62°46.5' N	-92°5.5' E	Stationary	10



Appendix E: Marine Mammal Survey Data and Sightings Information, 2020

Survey ID	Date	Platform Name and Type	Weather Notes	Glare Condition Notes	Sea State Code	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	True Platform Direction (deg)	Observation Side	Height of Eye (m)	Outdoors or Indoors	Species	Count
50	2020-09-19	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	1	1	Light Wind	275	0		Starboard and Port	26	Indoors	No Observations	-
51	2020-08-20	Zelada Desgagnés/ Cargo	Clear	None/bright	1	0	Calm	90	13	280	Starboard	13	Indoors	No Observations	-
52	2020-09-20	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	3	1	Strong Wind	270	0		Starboard	26	Indoors	No Observations	-
53	2020-08-21	Zelada Desgagnés/ Cargo	Clear	Slight/grey	5	2	Light Wind	135	14.5	280	Starboard	12	Indoors	No Observations	-
54	2020-09-21	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	2	1	Strong Wind	70	0		Starboard	26	Indoors	No Observations	-
55	2020-08-22	Zelada Desgagnés/ Cargo	100% Cloud	None/bright	1	1	Light Wind	0	0		Port	12	Indoors	No Observations	-
56	2020-09-22	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	2	1	Light Wind	45	0		Starboard and Port	26	Indoors	No Observations	-
57	2020-08-23	Zelada Desgagnés/ Cargo	Clear	None/bright	1	1	Calm	300	0		Starboard	12	Indoors	No Observations	-
58	2020-09-23	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	2	1	Light Wind	315	0		Starboard and Port	26	Indoors	No Observations	-
59	2020-08-24	Zelada Desgagnés/ Cargo	Clear	None/bright	2	1	Strong Wind	315	14	100	Starboard	22	Indoors	No Observations	-
60	2020-09-24	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	2	1	Light Wind	315	13.5	81	Starboard	26	Indoors	No Observations	-
61	2020-08-25	Zelada Desgagnés/ Cargo	Fog	None/bright	2	1	Light Wind	270	10	87	Starboard	22	Indoors	No Observations	-
62	2020-09-25	Zelada Desgagnés/ Cargo	100% Cloud	Slight/grey	4	1	Strong Wind	315	14.5	95	Starboard	26	Indoors	No Observations	-
63	2020-08-26	Zelada Desgagnés/ Cargo	Fog	None/bright	2	0	Light Wind	270	8	87	Starboard	22	Indoors	No Observations	-
64	2020-09-26	Zelada Desgagnés/ Cargo	Clear	None/bright	4	1	Calm	270	14	110	Starboard	26	Indoors	No Observations	-
65	2020-08-27	Zelada Desgagnés/ Cargo	Partly Cloudy	Slight/grey	2	2	Light Wind	45	7	112	Starboard	22	Indoors	No Observations	-
66	2020-09-29	Sedna Desgagnés/ Cargo	100% Cloud	Slight/grey	2	1	Light Wind	90	13	296	Starboard	30	Indoors	No Observations	-
67	2020-10-21	Sedna Desgagnés/ Cargo	Partly Cloudy	Slight/grey	4	2	Light Wind	245	13	53	Starboard	30	Indoors	No Observations	-
1033	2020-09-19	Dara Desgagnés/ Oil tanker	100% Cloud		2	1	Strong Wind	258	12.6	289		19	Indoors	No Observations	-
1043	2020-09-20	Dara Desgagnés/ Oil tanker	100% Cloud	None	1	1	Light Wind		10.5	276		19	Indoors	No Observations	-
1044	2020-09-21	Dara Desgagnés/ Oil tanker	100% Cloud	None	3	1	Strong Wind	23	13.7	293		19	Indoors	No Observations	-
1045	2020-09-22	Dara Desgagnés/ Oil tanker	Partly Cloudy	None	4	1	Strong Wind	65	0	107		19	Indoors	No Observations	-
1046	2020-09-28	Dara Desgagnés/ Oil tanker	100% Cloud	None	1	1	Light Wind	315	0	282		19	Indoors	No Observations	-
1047	2020-08-11	Kivalliq/ Chemical tanker	Clear	Bright	0	0	Calm	0	0	270	Starboard	25	Indoors	Other Species	1
1068	2020-10-09	Maria Desgagnés/ Tanker										20		No Observations	-
1069	2020-09-01	Miena Desgagnés/ Multi purpose	Clear		3	1.5	Light Wind	205	10.5	292	Port	24	Indoors	Other Species (Dolphin)	15
1101	2020-09-02	Miena Desgagnés/ Multi purpose	Partly Cloudy		4	1.5	Light Wind	195	12.2	274	Port		Indoors	No Observations	-
1102	2020-09-03	Miena Desgagnés/ Multi purpose	Rain		4	1.5	Light Wind	195	11	293	Starboard		Indoors	No Observations	-
1103	2020-09-04	Miena Desgagnés/ Multi purpose	Rain		2	1.5	Light Wind	0	12.1	310	Port	24	Indoors	No Observations	-
1104	2020-09-08	Miena Desgagnés/ Multi purpose	Clear	None	2	0.2	Light Wind	40	13.5	137	Bow	24	Outdoors	No Observations	-
1105	2020-09-09	Miena Desgagnés/ Multi purpose	Rain	None	6	0.8	Strong Wind	170	0	170	Port	25	Indoors	No Observations	-
1106	2020-09-10	Miena Desgagnés/ Multi Purpose	Rain	None	3	0.3	Strong Wind	340	0	345	Starboard	26	Indoors	No Observations	-
1107	2020-09-11	Miena Desgagnés/ Multi purpose	Clear	Bright	2	0.2	Light Wind	310	0	320	Starboard	26	Indoors	No Observations	-
1108	2020-09-12	Miena Desgagnés/ Multi purpose	Partly Cloudy	None	2	0.15	Light Wind	50	0	70	Port	26	Indoors	No Observations	-
1109	2020-09-13	Miena Desgagnés/ Multi purpose	100% Cloud	None	3	1.5		275	12	102	Starboard	26	Indoors	No Observations	-
1110	2020-09-14	Miena Desgagnés/ Multi purpose	100% Cloud		2	1.5	Light Wind	354	8.5	73	Starboard	26	Indoors	No Observations	-
1111	2020-09-15	Miena Desgagnés/ Multi purpose	Partly Cloudy	None	5	2	Light Wind	303	10	112	Starboard	26	Indoors	No Observations	-
1126	2020-08-05	Nordika Desgagnés/ General cargo	100% Cloud	None	4	1	Strong Wind	270	15	270	Starboard and Port	33	Indoors	No Observations	-
1127	2020-08-06	Nordika Desgagnés/ General cargo	Fog	None	2	0.5	Light Wind	225	12.3	230	Starboard	33	Indoors	No Observations	-
1128	2020-08-08	Nordika Desgagnés/ General cargo	Clear	None	1	1	Light Wind	180	0		Port	35	Indoors	No Observations	-
1129	2020-08-09	Nordika Desgagnés/ General cargo	Partly Cloudy	None	1	1	Light Wind	112	0		Port	35	Indoors	No Observations	-
1130	2020-08-10	Nordika Desgagnés/ General cargo	Clear	None	2	2	Light Wind	90	0	120	Port	35	Indoors	No Observations	-
1131	2020-08-11	General Cargo	Clear	None	1	1	Light Wind		0		Port	35	Outdoors	No Observations	-
1132	2020-08-12	Nordika Desgagnés/ General cargo	Partly Cloudy	None	1	1	Light Wind	0	0		Port	35	Indoors	No Observations	-
1133	2020-08-13	Nordika Desgagnés/ General cargo	100% Cloud	None	1	1	Light Wind	135	0	120	Port	35	Indoors	No Observations	-
1134	2020-08-14	Nordika Desgagnés/ General cargo	100% Cloud	None	2	1.5	Strong Wind	135	0		Starboard	32	Indoors	No Observations	-
1135	2020-08-15	Nordika Desgagnés/ General cargo	Partly Cloudy	None			Light Wind		12		Port	32	Indoors	No Observations	-
1136	2020-08-16	Nordika Desgagnés/ General cargo	Rain	None	2	1.5	Strong Wind	315	0	310	Starboard	32	Indoors	No Observations	-

Appendix E: Marine Mammal Survey Data and Sightings Information, 2020

Survey ID	Date	Platform Name and Type	Company/Agency	Observer(s)	Survey Type	Incidental?	Time at Start	Time at End	Effort	Survey Start		Survey End		Platform Activity	Visibility (km)
										Latitude	Longitude	Latitude	Longitude		
1137	2020-08-17	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	15:00:00	16:00:00	01:00:00	62°45.5' N	-92°4.7' E	62°46.5' N	-92°5.4' E	Stationary	10
1138	2020-08-18	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Stationary	No	14:00:01	16:00:00	02:00:00	62°46.5' N	-92°5.5' E	62°46.5' N	-92°5.4' E	Stationary	5
1139	2020-08-19	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Transect	No	15:00:00	16:00:00	01:00:00	62°45.9' N	-92°4.2' E	62°40.1' N	-91°42.9' E	Moving	10
1140	2020-08-20	Nordika Desgagnés/ General cargo	Desgagnés/Transarctik	Maude Rouleau	Transect	No	13:00:00	14:00:01	01:00:01	62°3.1' N	-81°53.9' E	62°12.3' N	-81°35.5' E	Moving	10
1141	2020-10-14	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	60°57.8' N	-65°36.4' E	65°35.0' N	-65°43.7' E	Moving	20
1142	2020-10-13	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	62°44.8' N	-74°6.5' E	62°35.7' N	-73°16.4' E	Moving	15
1143	2020-10-12	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	61°56.2' N	-83°2.3' E	62°3.2' N	-82°15.1' E	Moving	7
1144	2020-10-11	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	13:00:00	15:00:00	02:00:01	63°14.6' N	-90°3.3' E	63°3.5' N	-89°6.5' E	Moving	20
1145	2020-10-10	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	63°55.7' N	-33°2.4' E	63°45.2' N	-92°15.0' E	Moving	20
1146	2020-10-03	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	13:00:00	14:30:00	01:30:00	63°56.7' N	-93°35.7' E	63°56.7' N	-93°35.7' E	Stationary	15
1147	2020-10-08	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.6' N	-93°35.8' E	63°56.6' N	-93°35.8' E	Stationary	15
1148	2020-10-07	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.6' N	-93°35.8' E	63°56.6' N	-93°35.8' E	Stationary	15
1149	2020-10-06	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.6' N	-93°35.8' E	63°56.6' N	-93°35.8' E	Stationary	15
1150	2020-10-05	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.7' N	-93°35.7' E	63°56.7' N	-93°35.7' E	Stationary	15
1151	2020-10-04	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	13:00:00	15:00:00	02:00:01	63°56.7' N	-93°35.7' E	63°56.7' N	-93°35.7' E	Stationary	15
1152	2020-10-02	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Stationary	No	10:00:00	12:00:00	02:00:01	63°56.2' N	-93°37.0' E	63°56.2' N	-93°37.0' E	Stationary	15
1153	2020-10-02	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Stationary	No	10:00:00	12:00:00	02:00:01	63°56.2' N	-93°37.0' E	63°56.2' N	-93°38.0' E	Stationary	15
1154	2020-10-01	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	12:00:00	14:00:01	02:00:01	63°56.7' N	-93°35.7' E	63°56.7' N	-93°35.7' E	Stationary	15
1155	2020-09-30	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	63°37.3' N	-91°22.1' E	63°42.8' N	-92°6.3' E	Moving	20
1156	2020-09-29	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	13:00:00	15:00:00	02:00:01	62°53.3' N	-88°10.8' E	63°10.0' N	-83°40.7' E	Moving	
1157	2020-09-28	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	62°47.1' N	-74°45.5' E	62°44.8' N	-75°52.6' E	Moving	20
1158	2020-09-27	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	62°3.7' N	-64°51.9' E	61°53.0' N	-65°45.4' E	Moving	20
1159	2020-09-26	Sarah Desgagnés/ Tanker	Petronav	Zaldy Lagutan	Transect	No	08:00:01	10:00:00	02:00:00	66°16.6' N	-60°42.6' E	65°43.0' N	-60°52.5' E	Moving	15
1160	2020-07-03	Taiga Desgagnés	Desgagnés			Yes	03:10:01	03:55:01	00:45:00	49°59.6' N	-63°41.5' E	49°58.9' N	-63°28.3' E		7
1161	2020-07-05	Taiga Desgagnés	Desgagnés			Yes	12:33:00			57°3.8' N	-57°44.5' E				7
1162	2020-07-07	Taiga Desgagnés	Desgagnés			Yes	13:00:00	15:30:01	02:30:01	61°8.0' N	-63°32.0' E	61°2.9' N	-63°34.8' E		7
1163	2020-07-09	Taiga Desgagnés	Desgagnés			Yes	13:30:00	13:45:00	00:15:00	63°15.9' N	-75°10.3' E	63°15.3' N	-75°16.9' E		7
1164	2020-07-27	Taiga Desgagnés/	Desgagnés			Yes									7
1166	2020-08-18	Torm Camilla/ Oil/Chemical tanker	Torm	MMSO Nandakumar	Transect	Yes								Moving	11
1171	2020-08-03	Tuvaq W./ Tanker	Coastal Shipping	Mostapha Raji	Transect	Yes	10:00:00			63°56.2' N	-94°0.9' E			Moving	13
1174	2020-08-09	Tuvaq W./ Tanker	Coastal Shipping	Andrew Gillingham	Transect	No	12:30:01	16:00:00	03:30:00	63°56.0' N	-93°38.4' E	64°0.0' N	-94°18.0' E	Moving	20
1175	2020-08-10	Tuvaq W./ Tanker	Coastal Shipping	Andrew Gillingham	Transect	No	13:30:00	17:00:01	03:30:01	64°2.0' N	-94°18.0' E	64°7.0' N	-94°24.0' E	Moving	20
1176	2020-08-12	Tuvaq W./ Tanker	Coastal Shipping	Andrew Gillingham	Transect	No	03:30:01	07:00:00	03:30:00	64°7.3' N	-94°21.8' E	63°56.2' N	-93°35.5' E	Moving	20
1177	2020-08-10	Tuvaq W./ Tanker	Coastal Shipping	Andrew Gillingham	Transect	No	13:30:00	17:00:01	03:30:01	64°2.0' N	-94°18.0' E	67°7.0' N	-94°24.0' E	Moving	20
1178	2020-08-12	Tuvaq W./ Tanker	Coastal Shipping	Andrew Gillingham	Transect	No	15:00:00	19:00:00	04:00:00	63°56.3' N	-93°35.5' E	64°7.4' N	-94°21.8' E	Moving	20
1179	2020-08-13	Tuvaq W./ Tanker	Coastal Shipping	Will Bishop	Transect	Yes	04:30:00			63°58.2' N	-94°4.2' E			Moving	12
1180	2020-08-14	Tuvaq W./ Tanker	Coastal Shipping	Will Bishop	Transect	Yes								Moving	12
1187	2020-10-09	Sarah Desgagnés/ Tanker	Petronav	R Campanano	Stationary	No	12:00:00	14:00:01	02:00:01	63°35.6' N	-93°35.8' E	63°35.6' N	-93°35.8' E	Stationary	15

**Notes:**  
Weather code; 0 (< 50% cloud cover with no fog, rain, or snow), 1 (> 50% cloud cover with no fog, rain, or snow), 2 (pathcy fog), 3 (solid fog), 4 ( mist/light rain), 5 (medium to heavy rain), 6 (fog and rain), 7 ( snow); glare code; 0 (none), 1 (slight/grey), 2 (bright on the observer's side of the vessel), 3 (bright and forward of vessel); sea state code; 0 (calm, mirror-like, glassy), 1 (small wavelets, short but pronounced; crests do not break), 2 (large wavelets, crests begin to break; foam of glassy appearance; perhaps scattered white caps), 3 (small waves, becoming longer; fairly frequent white caps), 4 (moderate waves with more pronounced form; many white caps; chance of some spray); Ice type code; 0 (small, thin, newly formed, dinner plate-sized pieces), 3 (level piece 2 to 20 m across); Ice concentration; 0 (less than one tenth cover, open water), 2 (four tenths, open drift); deg = degrees; a dash indicated no data provided on the datasheets.



Appendix E: Marine Mammal Survey Data and Sightings Information, 2020

Survey ID	Date	Platform Name and Type	Weather Notes	Glare Condition Notes	Sea State Code	Wave Height (m)	Wind Speed (Beaufort Scale)	True Wind Direction (deg)	Platform Speed (Knots)	True Platform Direction (deg)	Observation Side	Height of Eye (m)	Outdoors or Indoors	Species	Count
1137	2020-08-17	Nordika Desgagnés/ General cargo	Partly Cloudy	None	2	1.5	Light Wind	315	0	310	Starboard	32	Indoors	No Observations	-
1138	2020-08-18	Nordika Desgagnés/ General cargo	100% Cloud		1	1	Light Wind	315	0	320	Starboard	32		No Observations	-
1139	2020-08-19	Nordika Desgagnés/ General cargo	Clear	None	1	0.5	Light Wind	180	12		Starboard	32	Indoors	No Observations	-
1140	2020-08-20	Nordika Desgagnés/ General cargo	100% Cloud	None	2	1.5	Light Wind	90	12.5	43	Starboard	32	Indoors	No Observations	-
1141	2020-10-14	Sarah Desgagnés/ Tanker	Partly Cloudy	None	4	1.75	Strong Wind	110	13.5	114	Middle	21	Indoors	No Observations	-
1142	2020-10-13	Sarah Desgagnés/ Tanker		None	5	2	Light Wind	108	13	114	Middle	21	Indoors	No Observations	-
1143	2020-10-12	Sarah Desgagnés/ Tanker		None	5	3	Gale Force Wind	140	13	58	Middle	21	Indoors	No Observations	-
1144	2020-10-11	Sarah Desgagnés/ Tanker	Partly Cloudy	None	1	0.25	Light Wind	118	14	113	Middle	21	Indoors	No Observations	-
1145	2020-10-10	Sarah Desgagnés/ Tanker	Partly Cloudy	None	2	0.4	Light Wind	340	12	71	Middle	21	Indoors	No Observations	-
1146	2020-10-03	Sarah Desgagnés/ Tanker	100% Cloud		1	0.2	Light Wind	295	0	250	Starboard	20	Indoors	No Observations	-
1147	2020-10-08	Sarah Desgagnés/ Tanker	Partly Cloudy		3	0.75	Light Wind		0	340	Port	20	Indoors	No Observations	-
1148	2020-10-07	Sarah Desgagnés/ Tanker			5	2	Gale Force Wind	330	0	358	Port	20	Indoors	No Observations	-
1149	2020-10-06	Sarah Desgagnés/ Tanker	100% Cloud	None	6	2.25	Strong Wind	320	0	325	Starboard	20		No Observations	-
1150	2020-10-05	Sarah Desgagnés/ Tanker	Partly Cloudy		3	0.75	Light Wind	350	0	350	Port	20	Indoors	No Observations	-
1151	2020-10-04	Sarah Desgagnés/ Tanker	100% Cloud		1	0.2	Light Wind	30	0	305	Starboard	20	Indoors	No Observations	-
1152	2020-10-02	Sarah Desgagnés/ Tanker			1	0.1	Light Wind	265	0	280	Port	20	Indoors	No Observations	-
1153	2020-10-02	Sarah Desgagnés/ Tanker			1	0.1	Light Wind	265	0	280	Port	20	Indoors	No Observations	-
1154	2020-10-01	Sarah Desgagnés/ Tanker	Partly Cloudy	None	1	0.1	Light Wind	310	0	290	Starboard	21	Indoors	No Observations	-
1155	2020-09-30	Sarah Desgagnés/ Tanker	Partly Cloudy	None	2	0.4	Light Wind	7	11	270		21		No Observations	-
1156	2020-09-29	Sarah Desgagnés/ Tanker	100% Cloud	None	5	3	Strong Wind	90	15	293		21		No Observations	-
1157	2020-09-28	Sarah Desgagnés/ Tanker	100% Cloud	None	2	0.4	Light Wind	132	15	266		21		No Observations	-
1158	2020-09-27	Sarah Desgagnés/ Tanker	Partly Cloudy		3	0.8	Light Wind	330	13.5	247	Middle	21	Indoors	No Observations	-
1159	2020-09-26	Sarah Desgagnés/ Tanker	Partly Cloudy	None	6	3	Light Wind	343	14	202	Middle	21	Indoors	No Observations	-
1160	2020-07-03	Taiga Desgagnés												Fin Whale, Unknown Seal (2 observations)	15, (7,3)
1161	2020-07-05	Taiga Desgagnés												Harbour Porpoise	4
1162	2020-07-07	Taiga Desgagnés												Polar Bear (2 observations)	(2,1)
1163	2020-07-09	Taiga Desgagnés												Unknown Seal, Atlantic Walrus	1, 1
1164	2020-07-27	Taiga Desgagnés/												Fin Whale	2
1166	2020-08-18	Torm Camilla/ Oil/Chemical tanker	Partly Cloudy		3	0.8	Light Wind					30	Indoors	No Observations	-
1171	2020-08-03	Tuvaq W./ Tanker	Clear	None			Calm		8	317	Port	18	Indoors	Muskox	10
1174	2020-08-09	Tuvaq W./ Tanker	Clear	None		1	Light Wind	90	9.7	295	Starboard	20	Indoors	Muskox	2
1175	2020-08-10	Tuvaq W./ Tanker	Clear	None	1	0.5	Light Wind	90	7	295	Starboard	30	Indoors	Muskox	2
1176	2020-08-12	Tuvaq W./ Tanker	Partly Cloudy	None	1	0.5	Light Wind	360	7	103	Starboard	20	Indoors	Muskox	5
1177	2020-08-10	Tuvaq W./ Tanker	Clear	None	1	0.5	Light Wind	90	7	295	Starboard	30	Indoors	Muskox	2
1178	2020-08-12	Tuvaq W./ Tanker	Partly Cloudy	None	1	0	Light Wind	270	7	306	Port	20	Outdoors	Muskox	5
1179	2020-08-13	Tuvaq W./ Tanker	Clear	Bright	1	0	Calm		10	147	Starboard	30	Outdoors	Muskox (3 observations)	(4,1,1)
1180	2020-08-14	Tuvaq W./ Tanker	Clear	Bright	1	0	Calm		9	280	Port and bow	30	Indoors	Unknown Duck	4
1187	2020-10-09	Sarah Desgagnés/ Tanker	Partly Cloudy		2	0.4	Light Wind	355	0	40	Starboard	20	Indoors	No Observations	-

**Notes:**  
Weather code; 0 (< 50% cloud cover with no fog, rain, or snow), 1 (> 50% cloud cover with no fog, rain, or snow), 2 (pathcy fog), 3 (solid fog), 4 ( mist/light rain), 5 (medium to heavy rain), 6 (fog and rain), 7 ( snow); glare code; 0 (none), 1 (slight/grey), 2 (bright on the observer's side of the vessel), 3 (bright and forward of vessel); sea state code; 0 (calm, mirror-like, glassy), 1 (small wavelets, short but pronounced; crests do not break), 2 (large wavelets, crests begin to break; foam of glassy appearance; perhaps scattered white caps), 3 (small waves, becoming longer; fairly frequent white caps), 4 (moderate waves with more pronounced form; many white caps; chance of some spray); Ice type code; 0 (small, thin, newly formed, dinner plate-sized pieces), 3 (level piece 2 to 20 m across); Ice concentration; 0 (less than one tenth cover, open water), 2 (four tenths, open drift); deg = degrees; a dash indicated no data provided on the datasheets.

## **APPENDIX F      SEABIRD SURVEY DATA 2020**

Appendix F: Seabird Survey Data, 2020

Table F-1: Seabird Survey Data and Environmental Variables Recorded during 2020 MMSO Program (Part 1)

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Coastal Shipping	Tuvaq W./ Tanker	Dean Ross	18-Jun-20	Transect								Moving	6	Rain
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin, Adam Vivier	28-Jun-20	Transect	12:10	15:15	03:05	60°1.20' N	-58°33.20' E	60°33.20' N	-59°32.60' E	Moving	30	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier, Hanuka Brochu	05-Jul-20	Transect	17:30	19:30	02:00	57°14.20' N	-57°52.80' E			Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	G Villeneuve	06-Jul-20	Transect	23:00			61°12.50' N	-62°49.00' E			Moving	15	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	06-Jul-20	Transect	14:00	15:00	01:00	63°18.60' N	-73°51.30' E	63°19.50' N	-73°52.20' E	Moving	25	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Maude Rouleau	07-Jul-20	Transect	18:00	19:00	01:00	62°47.84' N	-76°53.17' E	62°43.93' N	-77°14.00' E	Moving	25	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	07-Jul-20	Stationary	16:00			61°6.90' N	-63°29.20' E			Stationary	15	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	08-Jul-20	Stationary	18:30			61°32.80' N	-69°22.90' E			Stationary	8	Fog
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	09-Jul-20	Stationary	16:00			63°18.50' N	-74°47.10' E			Stationary	15	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	10-Jul-20	Stationary	16:00			62°13.10' N	-81°59.30' E			Stationary	15	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	10-Jul-20	Stationary	17:00	19:00	02:00	62°46.60' N	-92°5.40' E			Stationary	40	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	11-Jul-20	Stationary	16:00			62°45.30' N	-92°4.80' E			Stationary	15	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	11-Jul-20	Stationary	18:00	20:00	02:00	62°46.60' N	-92°5.40' E			Stationary	40	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	12-Jul-20	Stationary	16:00			62°45.30' N	-92°4.90' E			Stationary	15	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	12-Jul-20	Stationary	17:00	19:00	02:00	62°46.60' N	-92°5.50' E			Stationary	40	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	13-Jul-20	Stationary	16:00			62°45.30' N	-92°5.10' E			Stationary	15	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	13-Jul-20	Stationary	17:00	19:00	02:00	62°46.60' N	-92°5.50' E			Stationary		
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	14-Jul-20	Stationary	16:00			62°45.30' N	-92°5.30' E			Stationary	15	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	14-Jul-20	Stationary	17:00	19:00	02:00	62°46.60' N	-92°5.50' E			Stationary	20	Partly Cloudy

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	15-Jul-20	Stationary	16:00			62°45.30' N	-92°5.40' E			Stationary	15	Fog
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	15-Jul-20	Stationary	17:00	19:00	02:00	62°46.60' N	-92°5.50' E			Stationary	5	100% Cloud
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	16-Jul-20	Transect	23:50	1:50	02:00	60°18.10' N	-63°35.60' E	60°29.50' N	-64°23.90' E	Moving	19	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	16-Jul-20	Stationary	16:00			62°45.30' N	-92°5.20' E			Stationary	15	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	16-Jul-20	Stationary	17:00	19:00	02:00	62°46.60' N	-92°5.90' E			Stationary	10	Partly Cloudy
Desgagnés	Claude A Desgagnés/ Cargo	Daniel Mingorane-Gerable	17-Jul-20	Transect	13:00	15:00	02:00	61°54.43' N	-70°42.87' E	62°2.86' N	-71°24.26' E	Moving	5	100% Cloud
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	17-Jul-20	Stationary	16:00			62°46.40' N	-92°5.40' E			Stationary	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	18-Jul-20	Transect	13:00	15:00	02:00	62°39.30' N	-79°13.90' E	62°36.00' N	-80°15.50' E	Moving	2	100% Cloud
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	18-Jul-20	Transect	13:18	14:18	01:00	62°29.00' N	-74°7.10' E	62°30.90' N	-73°43.20' E	Moving	5	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	18-Jul-20	Stationary	16:00			62°46.50' N	-92°5.60' E			Stationary	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Daniel Mingorane-Gerable	19-Jul-20	Transect	14:00	16:00	02:00	62°41.49' N	-90°47.74' E	63°4.39' N	-90°20.01' E	Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	19-Jul-20	Stationary	16:00			62°46.50' N	-92°5.60' E			Stationary	15	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	20-Jul-20	Stationary	16:00			62°46.50' N	-92°5.50' E			Stationary	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	20-Jul-20	Stationary	22:00	0:00	02:00	63°56.50' N	-93°38.20' E			Stationary	20	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	21-Jul-20	Stationary	16:00			62°46.50' N	-92°5.50' E			Stationary	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	21-Jul-20	Stationary	22:00	0:00	02:00	63°56.40' N	-93°38.10' E			Stationary	20	Clear
Coastal Shipping	Tuvaq W./ Tanker	Dean Ross	21-Jul-20	Stationary				63°56.20' N	-93°36.70' E			Stationary	10	Clear
Coastal Shipping	Tuvaq W./ Tanker	Mostapha Raji	22-Jul-20	Transect	10:40			63°56.79' N	-93°48.88' E			Moving	7	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	22-Jul-20	Stationary	16:00			62°46.60' N	-92°5.80' E			Stationary	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	22-Jul-20	Stationary	22:00	0:00	02:00	63°56.40' N	-93°38.10' E			Stationary	20	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	23-Jul-20	Stationary	16:00			62°15.40' N	-81°44.40' E			Stationary	5	Fog
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	23-Jul-20	Stationary	22:00	0:00	02:00	63°56.50' N	-93°38.30' E			Stationary	20	Clear

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	24-Jul-20	Stationary	16:00			62°31.80' N	-72°14.50' E			Stationary	15	Fog
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	24-Jul-20	Stationary	22:00	0:00	02:00	63°56.30' N	-93°38.20' E			Stationary	20	Clear
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	25-Jul-20	Stationary	16:00			60°29.80' N	-63°59.30' E			Stationary	1	Fog
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	25-Jul-20	Stationary	22:00	0:00	02:00	63°56.20' N	-93°38.40' E			Stationary	20	Clear
	Torm Camilla/ Oil/ Chemical		26-Jul-20	Transect								Moving	10	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	26-Jul-20	Stationary	22:00	0:00	02:00	63°56.50' N	-93°38.30' E			Stationary	20	Partly Cloudy
	Torm Camilla/ Oil/ Chemical		27-Jul-20	Transect								Moving	10	Clear
Coastal Shipping	Tuvaq W./ Tanker	Andrew Gillingham	27-Jul-20	Transect	16:24			63°59.60' N	-94°15.20' E	63°56.20' N	-93°38.50' E	Moving	32	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	27-Jul-20	Stationary	22:00	0:00	02:00	63°56.40' N	-93°38.30' E			Stationary	20	Clear
Coastal Shipping	Tuvaq W./ Tanker	Andrew Gillingham	28-Jul-20	Transect	3:00	6:00	03:00	63°56.20' N	-93°38.50' E	63°59.60' N	-94°15.20' E	Moving	32	Partly Cloudy
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	28-Jul-20	Stationary	22:00	0:00	02:00	63°56.40' N	-93°38.30' E			Stationary	20	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	29-Jul-20	Stationary	22:00	0:00	02:00	63°56.40' N	-93°38.30' E			Stationary	20	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	30-Jul-20	Stationary	22:00	0:00	02:00	63°56.50' N	-93°38.30' E			Stationary	20	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	31-Jul-20	Stationary	22:00	0:00	02:00	63°56.11' N	-93°38.30' E			Stationary	20	Partly Cloudy
	Torm Camilla/ Oil/ Chemical		02-Aug-20	Transect								Moving	10	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	02-Aug-20	Stationary	12:00	14:00	02:00	62°45.20' N	-92°2.40' E			Stationary	20	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	02-Aug-20	Stationary	13:30	14:00	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	03-Aug-20	Transect	11:00	13:00	02:00	62°40.30' N	-78°19.40' E			Moving	20	Partly Cloudy
coastal Shipping	Tuvaq W./ Tanker	Dean Ross	03-Aug-20	Transect	9:00			63°57.40' N	-93°40.40' E			Moving	10	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	03-Aug-20	Stationary	13:30	14:00	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Partly Cloudy
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	04-Aug-20	Transect	11:00	13:00	02:00	60°46.70' N	-65°57.80' E	60°29.20' N	-64°23.60' E	Moving	20	Partly Cloudy
	Torm Camilla/ Oil/ Chemical		04-Aug-20	Transect								Moving	10	Clear



Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	04-Aug-20	Stationary	13:30	14:00	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo ship	Melina Jobin	05-Aug-20	Transect	8:30	10:00	01:30	60°50.70' N	-64°55.20' E	60°53.90' N	-65°33.60' E	Moving	10	100% Cloud
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	05-Aug-20	Stationary	10:00	10:30	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Melina Jobin	06-Aug-20	Transect	21:40	22:45	01:05	62°28.40' N	-80°59.70' E	62°19.00' N	-81°25.10' E	Moving	1	Fog
Coastal Shipping	Tuvaq W./ Tanker	Andrew Gillingham	06-Aug-20	Transect	12:17			63°57.90' N	-94°4.00' E			Moving	10	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	06-Aug-20	Stationary	10:00	10:30	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Partly Cloudy
Coastal Shipping	Kivalliq W./ Chemical tanker	David Hulan	07-Aug-20	Stationary	10:00	10:30	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	100% Cloud
Rigel Shipping	Dara Desgagnés/ Tanker	Shane Hickey	08-Aug-20	Transect				64°3.00' N	-94°21.00' E			Moving	8	Clear
Coastal Shipping (Petro-Nav)	Kivalliq W./ Chemical Tanker	Curtis Buckmaster	08-Aug-20	Stationary	8:00	12:00	04:00	64°7.40' N	-94°21.50' E	64°7.40' N	-94°21.50' E	Stationary	30	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	08-Aug-20	Stationary	10:00	10:30	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	08-Aug-20	Stationary	12:00	13:30	01:30	62°45.90' N	-92°4.00' E	62°45.90' N	-92°3.70' E	Stationary	10	Clear
Rigel Shipping	Dara Desgagnés/ Tanker oil	Sieriy Nigovan	09-Aug-20	Stationary				64°18.12' N	-95°57.10' E			Stationary	27	Partly Cloudy
Coastal Shipping	Kivalliq W./ Cheical tanker	David Hulan	09-Aug-20	Stationary	10:00	10:30	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	09-Aug-20	Stationary	12:00	13:00	01:00	63°57.00' N	-93°35.00' E	63°57.00' N	-93°35.20' E	Stationary	10	Partly Cloudy
Coastal Shipping	Kivalliq W./ Chemical tanker	David Hulan	10-Aug-20	Stationary	10:00	10:30	00:30	64°1.80' N	-94°18.30' E	64°1.80' N	-94°18.30' E	Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	10-Aug-20	Stationary	22:00	23:30	01:30					Stationary	10	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	11-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°22.00' E	64°7.20' N	-94°22.00' E	Stationary	10	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	Maude Rouleau	11-Aug-20	Stationary	12:00	13:30	01:30	63°56.90' N	-93°35.20' E	63°57.00' N	-93°35.30' E	Stationary	10	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	12-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°22.00' E	64°7.20' N	-94°22.00' E	Stationary	10	100% Cloud

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	12-Aug-20	Stationary	12:00	13:00	01:00	63°56.90' N	-93°35.10' E	63°56.90' N	-93°35.10' E	Stationary	10	Partly Cloudy
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	13-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°22.00' E	64°7.20' N	-94°22.00' E	Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	13-Aug-20	Stationary	14:00	15:30	01:30	63°57.10' N	-93°35.20' E	63°57.10' N	-93°35.30' E	Stationary	10	Partly Cloudy
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	14-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°22.00' E	64°7.20' N	-94°22.00' E	Stationary	10	100% Cloud
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	14-Aug-20	Stationary	12:00	14:00	02:00	63°57.10' N	-93°35.10' E	63°57.10' N	-93°35.20' E	Stationary	10	Rain
Desgagnés	Zelada/ Cargo	Blakes Loveys	15-Aug-20	Transect	11:30	12:00	00:30	60°51.30' N	-66°9.40' E	60°52.10' N	-66°16.10' E	Moving	10	Partly Cloudy
Desgagnés	Zelada/ Cargo	Simon Desgagnés	15-Aug-20	Transect	12:00	13:00	01:00	60°52.00' N	-66°16.00' E			Moving	10	Partly Cloudy
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	Maude Rouleau	15-Aug-20	Transect	13:00	15:00	02:00	63°59.30' N	-92°56.90' E	63°43.80' N	-92°10.40' E	Moving	10	Partly Cloudy
Coastal Shipping	Kivalliq W./ Chemical tanker	David Hulan	15-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°27.00' E	64°7.20' N	-94°27.00' E	Stationary	10	Partly Cloudy
Desgagnés	Zelada/ Cargo	Blakes Loveys	16-Aug-20	Transect	10:58	12:00	01:02	61°6.80' N	-69°35.30' E	61°13.60' N	-69°46.10' E	Moving	10	Clear
Desgagnés	Zelada/ Cargo	Simon Desgagnés	16-Aug-20	Transect	12:00	13:00	01:00	61°15.70' N	-69°46.20' E	61°24.30' N	-69°51.10' E	Moving	10	Clear
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	16-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°27.00' E	64°7.20' N	-94°27.00' E	Stationary	10	100% Cloud
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	Maude Rouleau	16-Aug-20	Stationary	14:00	15:30	01:30	62°46.50' N	-92°5.50' E	62°46.50' N	-92°5.40' E	Stationary	10	100% Cloud
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	17-Aug-20	Transect	13:00	15:30	02:30	62°45.50' N	-92°4.60' E	62°46.60' N	-92°5.69' E	Moving	10	Partly Cloudy
Desgagnés	Zelada/ Cargo	Philippe Morin	17-Aug-20	Stationary	12:00	16:00	04:00			62°7.70' N	-74°37.50' E	Stationary	6	Rain
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	17-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°27.00' E	64°7.20' N	-94°27.00' E	Stationary	10	100% Cloud
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	18-Aug-20	Transect	20:00	22:00	02:00	60°5.90' N	-62°57.70' E	60°24.70' N	-63°34.40' E	Moving	20	Partly Cloudy
Torm	Torm Camilla/ Oil/Chemical Tanker	MMSO - Nandakumar	18-Aug-20	Transect	14:00	20:00	06:00	63°57.00' N	-93°8.00' E	63°34.00' N	-91°1.70' E	Moving		Partly Cloudy
Desgagnés	Zelada/ Cargo	Philippe Morin	18-Aug-20	Stationary	12:00	16:00	04:00	62°7.70' N	-74°37.50' E	62°7.70' N	-74°37.50' E	Stationary	4	Fog
Coastal Shipping	Kivalliq W./ Chemical Tanker	David Hulan	18-Aug-20	Stationary	10:00	10:30	00:30	64°7.20' N	-94°27.00' E	64°7.20' N	-94°27.00' E	Stationary	10	100% Cloud

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	Maude Rouleau	18-Aug-20	Stationary	14:00	17:00	03:00	62°46.50' N	-92°5.50' E	62°46.50' N	-92°5.50' E	Stationary	10	100% Cloud
Desgagnés	Zelada/ Cargo	Blakes Loveys	19-Aug-20	Transect	18:00	20:00	02:00	62°13.10' N	-74°46.40' E	62°21.90' N	-75°27.50' E	Moving	10	Partly Cloudy
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	19-Aug-20	Transect	12:00	14:00	02:00	61°22.80' N	-69°10.90' E	61°32.40' N	-69°55.40' E	Moving	6	100% Cloud
Coastal Shipping	Tuvaq W./ Tanker	W.B.S.W	19-Aug-20	Transect								Moving	15	Clear
Coastal Shipping	Kivalliq W./ Chemical tanker	David Hulan	19-Aug-20	Stationary	10:00	10:30	00:30	64°17.60' N	-95°58.10' E	64°17.60' N	-95°58.10' E	Stationary	10	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	Maude Rouleau	19-Aug-20	Stationary	12:00	13:30	01:30	62°46.60' N	-92°5.50' E	62°46.60' N	-92°5.50' E	Stationary	10	Clear
Desgagnés	Zelada/ Cargo	Simon Desgagnés	20-Aug-20	Transect	15:15	16:00	00:45	62°2.20' N	-84°9.80' E	62°3.90' N	-84°30.20' E	Moving	10	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	20-Aug-20	Transect	12:00	14:00	02:00	62°43.30' N	-78°4.40' E	62°40.70' N	-78°49.40' E	Moving	20	Clear
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	Maude Rouleau	20-Aug-20	Transect	13:00	15:00	02:00	62°3.10' N	-81°53.90' E	62°21.40' N	-81°17.10' E	Moving	10	100% Cloud
Torm	Torm Camilla/ Oil/Chemical Tanker	Nanda and Rahamat Au	20-Aug-20	Transect	9:00	10:30	01:30	63°17.90' N	-75°5.60' E	61°0.00' N	-64°57.00' E	Moving	5	100% Cloud
Coastal Shipping	Kivalliq W./ Chemical tanker	David Hulan	20-Aug-20	Stationary	10:00	10:30	00:30	64°17.60' N	-95°58.10' E	64°17.60' N	-95°58.10' E	Stationary	5	Rain
Desgagnés	Zelada/ Cargo	Blakes Loveys	21-Aug-20	Transect	8:00	9:00	01:00	62°42.00' N	-91°38.80' E	62°44.40' N	-91°58.80' E	Moving	9	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	21-Aug-20	Transect	12:00	14:00	02:00	62°46.40' N	-87°50.40' E	62°54.60' N	-88°32.50' E	Moving	20	Partly Cloudy
Desgagnés	Zelada/ Cargo	Blakes Loveys	22-Aug-20	Stationary	12:00	13:00	01:00	62°46.60' N	-92°5.70' E	62°46.60' N	-92°5.70' E	Stationary	10	100% Cloud
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	22-Aug-20	Stationary	12:00	14:00	02:00	63°18.40' N	-90°37.30' E	63°18.40' N	-90°37.30' E	Stationary	20	Clear
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	23-Aug-20	Transect	10:05	10:35	00:30	60°41.60' N	-65°32.30' E	60°44.70' N	-65°44.20' E	Moving	50	Clear
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	23-Aug-20	Transect	16:00	16:38	00:38	61°14.64' N	-67°48.78' E	61°18.07' N	-68°4.71' E	Moving	50	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	23-Aug-20	Transect	18:10			61°26.40' N	-68°39.90' E			Moving	50	Partly Cloudy
Coastal Shipping	Kivalliq W./ Chemical Type II Tanker	Adam Tanner	23-Aug-20	Transect	18:21			63°53.10' N	-92°31.50' E			Moving	20	Partly Cloudy
Desgagnés	Zelada/ Cargo	Blakes Loveys	23-Aug-20	Stationary	12:00	13:00	01:00	62°46.60' N	-92°5.70' E	62°46.60' N	-92°5.70' E	Stationary	10	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	23-Aug-20	Stationary	12:00	14:00	02:00	63°18.60' N	-90°37.30' E	63°18.60' N	-90°37.30' E	Stationary	20	Clear

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	24-Aug-20	Transect	18:10	18:40	00:30	62°33.30' N	-79°8.50' E	62°31.20' N	-79°25.40' E	Moving	40	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	24-Aug-20	Transect	10:00	10:30	00:30	62°34.30' N	-75°14.20' E	62°34.70' N	-75°27.30' E	Moving	10	100% Cloud
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	24-Aug-20	Transect	16:35	17:08	00:33	62°38.66' N	-78°2.27' E	62°36.67' N	-78°40.99' E	Moving	50	100% Cloud
Desgagnés	Zelada/ Cargo	Philippe Morin	24-Aug-20	Transect	12:00	14:30	02:30	62°33.60' N	-90°32.20' E	62°27.30' N	-89°16.20' E	Moving	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	24-Aug-20	Stationary	10:00	12:00	02:00	63°56.40' N	-93°37.80' E	63°56.40' N	-93°37.80' E	Stationary	20	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	25-Aug-20	Transect	10:00	10:30	00:30	62°15.40' N	-80°28.20' E	62°16.60' N	-86°42.90' E	Moving	30	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	25-Aug-20	Transect	16:30	17:00	00:30	62°29.60' N	-89°27.80' E	62°30.75' N	-89°41.50' E	Moving	40	Clear
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	25-Aug-20	Transect	18:10	18:40	00:30	62°33.30' N	-90°15.40' E	62°34.40' N	-90°30.00' E	Moving	40	Clear
Desgagnés	Zelada/ Cargo	Simon Desgagnés	25-Aug-20	Transect	12:00	13:00	01:00	62°32.50' N	-75°19.30' E	62°30.90' N	-73°21.10' E	Moving	1	Fog
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	25-Aug-20	Stationary	10:00	12:00	02:00	63°56.50' N	-93°37.70' E	63°56.50' N	-93°37.70' E	Stationary	20	Clear
Desgagnés	Zelada/ Cargo	Simon Desgagnés	26-Aug-20	Transect	13:20	14:00	00:40	62°30.90' N	-73°51.40' E	62°31.20' N	-73°41.30' E	Moving	1	Fog
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	26-Aug-20	Stationary	10:00	12:00	02:00	63°56.40' N	-93°37.70' E	63°56.40' N	-93°37.80' E	Stationary	20	Partly Cloudy
Desgagnés	Zelada/ Cargo	Valerie Caron	27-Aug-20	Transect	16:00	18:00	02:00	61°22.00' N	-67°30.00' E	61°15.00' N	-66°56.00' E	Moving	10	Partly Cloudy
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	27-Aug-20	Stationary	10:00	12:00	02:00	63°56.50' N	-93°37.80' E	63°56.50' N	-93°37.80' E	Stationary	20	100% Cloud
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	28-Aug-20	Stationary	6:00	8:00	02:00	63°56.50' N	-93°37.60' E	63°56.50' N	-93°37.60' E	Stationary	20	Partly Cloudy
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	29-Aug-20	Stationary	6:00	8:00	02:00	63°56.50' N	-93°37.60' E	63°56.50' N	-93°37.60' E	Stationary	5	Fog
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	30-Aug-20	Stationary	6:00	8:00	02:00	63°56.50' N	-93°37.90' E	63°56.50' N	-93°37.90' E	Stationary	20	100% Cloud
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	31-Aug-20	Stationary	6:00	8:00	02:00	63°56.50' N	-93°37.80' E	63°56.50' N	-93°37.80' E	Stationary		100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre Lamarre	01-Sep-20	Transect	14:00	15:42	01:42	60°48.60' N	-64°47.10' E	60°56.30' N	-65°24.60' E	Moving	15	Clear
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	01-Sep-20	Stationary	6:00	8:00	02:00	63°56.50' N	-93°37.90' E	63°56.50' N	-93°37.90' E	Stationary	20	Rain
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	02-Sep-20	Transect	8:00	10:00	02:00	62°24.50' N	-85°55.50' E	62°12.90' N	-84°57.20' E	Moving	20	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre Lamarre	02-Sep-20	Transect	15:00	15:30	00:30	62°36.10' N	-76°39.20' E	62°36.60' N	-76°51.10' E	Moving	15	Partly Cloudy

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés	Claude A Desgagnés/ Cargo	Alexandre Vézina	03-Sep-20	Transect	8:00	10:00	02:00	62°31.90' N	-74°9.00' E	62°27.30' N	-73°6.30' E	Moving	20	Partly Cloudy
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre Lamarre	03-Sep-20	Transect	14:00	14:30	00:30	62°21.70' N	-85°34.60' E	62°24.40' N	-84°48.40' E	Moving	12	Rain
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre Lamarre	04-Sep-20	Transect	14:00	15:00	01:00	63°32.70' N	-91°2.60' E	63°36.80' N	-91°20.50' E	Moving	12	Rain
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	05-Sep-20	Stationary	13:00	14:00	01:00	63°56.30' N	-93°37.60' E	63°56.30' N	-93°37.60' E	Stationary	8	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	06-Sep-20	Stationary	12:30	13:30	01:00	63°56.30' N	-93°37.60' E	63°56.30' N	-93°37.60' E	Stationary	10	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	07-Sep-20	Stationary	14:10	15:10	01:00	63°56.30' N	-93°37.60' E	63°56.30' N	-93°37.60' E	Stationary	10	Clear
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	08-Sep-20	Transect	15:00	16:00	01:00	62°59.30' N	-90°26.70' E	62°47.00' N	-90°41.50' E	Moving	10	Clear
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	09-Sep-20	Stationary	11:00	12:00	01:00	62°45.20' N	-92°4.20' E	62°45.20' N	-92°4.20' E	Stationary	5	Rain
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	10-Sep-20	Transect	18:00	18:30	00:30	62°31.00' N	-73°53.40' E	62°30.80' N	-78°38.50' E	Moving	5	Partly Cloudy
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	10-Sep-20	Stationary	13:00	14:00	01:00	62°46.50' N	-92°5.60' E	62°46.50' N	-92°5.60' E	Stationary	6	Rain
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	11-Sep-20	Transect	18:02	18:32	00:30	60°14.60' N	-63°51.70' E	60°8.90' N	-63°43.20' E	Moving	5	100% Cloud
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	11-Sep-20	Transect	15:55	16:30	00:35	60°31.45' N	-64°42.04' E	60°29.02' N	-64°25.80' E	Moving	5	Rain
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	11-Sep-20	Transect	8:20	9:12	00:52	61°14.74' N	-67°48.91' E	61°9.63' N	-67°28.05' E	Moving	5	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	11-Sep-20	Stationary	8:00	9:00	01:00	62°46.60' N	-92°5.60' E	62°46.60' N	-92°5.60' E	Stationary	10	Clear
Desgagnés	Zelada/ Cargo	Blakes Loveys	12-Sep-20	Transect	17:30	19:30	02:00	61°31.00' N	-66°44.00' E	61°42.00' N	-67°36.00' E	Moving	10	Partly Cloudy
Desgagnés	Miena Desgagnés/ Multi purpose	Ivan Oxford	12-Sep-20	Stationary	8:00	9:00	01:00	62°46.60' N	-92°5.90' E	62°46.60' N	-92°5.90' E	Stationary	10	Partly Cloudy
Desgagnés	Zelada/ Cargo	Philippe Morin	13-Sep-20	Transect	12:10	15:00	02:50	62°50.00' N	-75°14.00' E	62°53.00' N	-76°35.00' E	Moving	10	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre Lamarre	13-Sep-20	Transect	14:00	15:00	01:00	62°27.40' N	-90°10.40' E	62°25.30' N	-88°45.10' E	Moving	10	100% Cloud
Desgagnés	Zelada/ Cargo	Philippe Morin	14-Sep-20	Transect	12:55	15:20	02:25	62°49.00' N	-87°10.00' E	62°45.00' N	-88°19.00' E	Moving	10	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre Lamarre	14-Sep-20	Transect	14:00	15:00	01:00	62°25.10' N	-80°7.20' E	62°27.30' N	-79°49.50' E	Moving	10	100% Cloud
Desgagnés	Miena Desgagnés/ Multi purpose	Alexandre lamarre	15-Sep-20	Transect	14:00	15:00	01:00	61°50.30' N	-69°57.60' E	61°46.10' N	-69°35.50' E	Moving	10	Partly Cloudy
Desgagnés	Zelada/ Cargo	Marc-Antoine L heureux	15-Sep-20	Stationary	12:00	14:00	02:00	62°46.70' N	-92°5.30' E	62°46.70' N	-92°5.30' E	Stationary	18	100% Cloud
Desgagnés	Zelada/ Cargo	Marc-Antoine L heureux	16-Sep-20	Stationary	12:00	14:00	02:00	63°56.50' N	-93°38.70' E	63°56.50' N	-93°38.70' E	Stationary	18	100% Cloud



Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés	Zelada/ Cargo	Marc-Antoine L heureux	17-Sep-20	Stationary	12:00	14:00	02:00	63°56.50' N	-93°38.70' E	63°56.50' N	-93°38.70' E	Stationary	18	100% Cloud
Desgagnés	Zelada/ Cargo	Marc-Antoine L heureux	18-Sep-20	Stationary	12:00	14:00	02:00	62°47.70' N	-92°5.90' E	62°47.70' N	-92°5.90' E	Stationary	18	100% Cloud
Rigel Shipping	Dara Desgagnés/ Oil tanker	Rishabh N Sharma	19-Sep-20	Transect	6:00	6:30	00:30	61°27.90' N	-66°18.90' E	61°30.40' N	-66°32.40' E	Moving		100% Cloud
Rigel Shipping	Dara Desgagnés/ Oil tanker	Rishabh N Sharma	19-Sep-20	Transect	6:00	6:30	00:30	61°27.90' N	-66°18.90' E	61°30.40' N	-66°32.40' E	Moving	10	100% Cloud
Desgagnés	Zelada/ Cargo	Philippe Morin	19-Sep-20	Stationary	12:00	15:00	03:00	62°48.00' N	-92°6.00' E	62°48.00' N	-92°6.00' E	Stationary	10	100% Cloud
Rigel Shipping	Dara Desgagnés/ Oil tanker	Rishabh N Sharma	20-Sep-20	Transect	7:30	8:00	00:30	62°42.00' N	-77°37.20' E	62°42.70' N	-77°48.90' E	Moving	10	100% Cloud
Desgagnés	Zelada/ Cargo	Marc-Antoine L heureux	20-Sep-20	Stationary	12:00	14:00	02:00	63°30.90' N	-91°4.10' E	63°30.90' N	-91°4.10' E	Stationary	18	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	21-Sep-20	Transect	9:00	10:00	01:00	60°26.70' N	-64°14.10' E	60°31.60' N	-64°39.50' E	Moving	10	100% Cloud
Desgagnés	Zelada/ Cargo	Marc-Antoine L heureux	21-Sep-20	Stationary	12:00	14:00	02:00	63°31.00' N	-91°4.80' E	63°31.00' N	-91°4.80' E	Stationary	18	100% Cloud
Rigel Shipping	Dara Desgagnés/ Oil tanker	Rishabh N Sharma	21-Sep-20	Stationary	17:15	17:45	00:30	63°18.50' N	-90°38.10' E			Stationary	10	100% Cloud
Rigel Shipping	Dara Desgagnés/ Oil tanker	Rishabh N Sharma	22-Sep-20	Transect	15:45	16:15	00:30	63°37.80' N	-91°30.50' E	63°41.20' N	-91°38.90' E	Moving	10	100% Cloud
Desgagnés	Zelada/ Cargo	Philippe Morin	22-Sep-20	Stationary	12:00	15:00	03:00	62°46.50' N	-92°59.00' E	62°46.50' N	-92°59.00' E	Stationary	12	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	22-Sep-20	Stationary	21:00	22:00	01:00	62°11.90' N	-75°43.50' E	62°11.90' N	-75°43.50' E	Stationary	10	Rain
Desgagnés	Zelada/ Cargo	Philippe Morin	23-Sep-20	Stationary	12:00	15:30	03:30	62°46.50' N	-92°5.70' E	62°46.50' N	-92°5.70' E	Stationary	18	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	23-Sep-20	Stationary	9:00	10:00	01:00	62°12.20' N	-75°43.20' E	62°12.10' N	-75°43.20' E	Stationary	15	Partly Cloudy
Rigel Shipping	Dara Desgagnés/ Oil tanker	Rishabh N Sharma	23-Sep-20	Stationary	8:15	8:45	00:30	63°57.40' N	-93°33.90' E			Stationary	10	100% Cloud
Desgagnés	Zelada/ Cargo	Philippe Morin	24-Sep-20	Transect	12:00	15:05	03:05	62°40.20' N	-89°31.00' E	62°46.00' N	-88°0.00' E	Moving	18	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	24-Sep-20	Stationary	9:00	10:00	01:00	62°11.90' N	-75°43.50' E	62°11.90' N	-75°43.40' E	Stationary	12	Rain
Desgagnés	Zelada/ Cargo	Philippe Morin	25-Sep-20	Transect	12:00	15:00	03:00	62°56.00' N	-77°24.00' E	62°52.00' N	-75°49.00' E	Moving	18	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	25-Sep-20	Transect	9:00	10:00	01:00	63°7.70' N	-82°33.00' E	63°7.00' N	-83°4.90' E	Moving	35	Clear
Desgagnés	Zelada/ Cargo	Philippe Morin	26-Sep-20	Transect	12:15	15:00	02:45	61°28.00' N	-65°46.00' E	61°7.00' N	-64°54.00' E	Moving	27	Clear
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	26-Sep-20	Stationary	8:00	9:00	01:00	62°45.30' N	-92°5.70' E	62°45.30' N	-92°5.40' E	Stationary	15	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	27-Sep-20	Transect	21:00	22:00	01:00	62°37.00' N	-90°51.60' E	62°47.10' N	-90°36.40' E	Moving	20	Clear
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	28-Sep-20	Stationary	22:00	23:00	01:00	63°57.20' N	-93°34.80' E	63°57.20' N	-93°34.80' E	Stationary	20	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	29-Sep-20	Transect	10:00	10:30	00:30	61°5.60' N	-67°12.00' E	61°8.50' N	-67°24.00' E	Moving	10	100% Cloud

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	29-Sep-20	Transect	13:02	13:50	00:48	61°23.06' N	-68°24.86' E	61°27.61' N	-68°44.37' E	Moving	10	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	29-Sep-20	Stationary	5:00	6:00	01:00	63°57.10' N	-93°34.90' E	63°57.10' N	-93°34.90' E	Stationary	10	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	30-Sep-20	Stationary	12:00	13:00	01:00	63°57.00' N	-93°35.00' E	63°57.00' N	-93°35.00' E	Stationary	15	Partly Cloudy
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	01-Oct-20	Stationary	12:00	13:00	01:00	63°57.00' N	-93°35.00' E	63°57.00' N	-93°35.00' E	Stationary	20	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	02-Oct-20	Stationary	12:00	13:00	01:00	63°57.00' N	-93°34.60' E	63°57.00' N	-93°34.60' E	Stationary	20	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	03-Oct-20	Stationary	12:00	13:00	01:00	63°57.00' N	-93°35.10' E	63°57.00' N	-93°35.10' E	Stationary	15	Partly Cloudy
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	04-Oct-20	Stationary	12:00	13:00	01:00	63°57.00' N	-93°35.00' E	63°57.00' N	-93°35.00' E	Stationary	20	Partly Cloudy
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	05-Oct-20	Stationary	3:00	4:00	01:00	63°57.00' N	-93°34.80' E	63°57.00' N	-93°34.80' E	Stationary	15	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	06-Oct-20	Stationary				62°46.60' N	-92°5.70' E	62°46.60' N	-92°5.70' E	Stationary	15	Partly Cloudy
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	07-Oct-20	Stationary	12:00	13:00	01:00	63°31.00' N	-91°4.70' E	63°31.00' N	-91°4.70' E	Stationary	15	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	08-Oct-20	Stationary	12:00	13:00	01:00	63°31.00' N	-91°4.60' E	63°31.00' N	-91°4.60' E	Stationary	15	100% Cloud
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	09-Oct-20	Transect	12:00	13:00	01:00	61°26.00' N	-83°37.00' E	61°33.00' N	-84°2.00' E	Moving	10	Clear
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	09-Oct-20	Stationary	12:00	13:00	01:00	63°31.00' N	-91°4.80' E	63°31.00' N	-91°4.80' E	Stationary	10	100% Cloud
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	10-Oct-20	Stationary	12:00	13:00	01:00	63°31.00' N	-91°4.80' E	63°31.00' N	-91°4.80' E	Stationary	15	100% Cloud
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	10-Oct-20	Stationary	12:00	13:00	01:00	63°30.00' N	-91°7.00' E	63°30.00' N	-91°7.00' E	Stationary	10	Partly Cloudy
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	11-Oct-20	Transect	9:00	10:00	01:00	61°59.80' N	-84°21.70' E	61°55.10' N	-83°53.30' E	Moving	15	100% Cloud
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	11-Oct-20	Transect	15:00	16:00	01:00	63°11.00' N	-90°14.00' E	62°59.00' N	-90°27.00' E	Moving	10	Partly Cloudy
Transarctik	Nordika Desgagnés/ Cargo	Mélina Jobin	12-Oct-20	Transect	8:00	9:00	01:00	62°30.60' N	-73°6.10' E	62°24.60' N	-72°32.50' E	Moving	15	100% Cloud
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	12-Oct-20	Stationary	13:00	14:00	01:00	62°47.00' N	-91°59.00' E	62°47.00' N	-91°59.00' E	Stationary	4	Fog
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	13-Oct-20	Stationary	13:00	14:00	01:00	62°47.00' N	-91°59.00' E	62°47.00' N	-91°59.00' E	Stationary	5	Rain
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	14-Oct-20	Stationary	13:00	14:00	01:00	62°47.00' N	-91°59.00' E	62°47.00' N	-91°59.00' E	Stationary	5	Rain

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	15-Oct-20	Stationary	1:15			60°5.80' N	-63°34.50' E			Stationary	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	15-Oct-20	Stationary	16:00			61°42.00' N	-68°19.70' E			Stationary		100% Cloud
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	15-Oct-20	Stationary	14:00	15:00	01:00	62°47.00' N	-92°6.00' E	62°47.00' N	-92°6.00' E	Stationary	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	16-Oct-20	Stationary	16:00			62°40.60' N	-79°5.60' E			Stationary	10	Snow
	Maria Desgagnés/	M Flynn	16-Oct-20	Stationary	15:40			62°8.00' N	-92°1.00' E			Stationary	10	
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	17-Oct-20	Stationary	16:00			62°33.50' N	-90°7.30' E			Stationary	10	Partly Cloudy
	Maria Desgagnés/	M Flynn	17-Oct-20	Stationary	12:20			62°8.00' N	-92°1.00' E			Stationary	10	
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	18-Oct-20	Stationary	16:00			62°46.50' N	-92°5.90' E			Stationary	10	Clear
	Maria Desgagnés/	M Flynn	18-Oct-20	Stationary	13:10			62°8.00' N	-91°1.00' E			Stationary	10	
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	19-Oct-20	Transect	15:00	16:00	01:00	62°33.00' N	-91°25.00' E	62°34.00' N	-91°12.00' E	Moving	10	100% Cloud
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	19-Oct-20	Stationary	16:00			62°46.50' N	-92°5.70' E			Stationary	10	Partly Cloudy
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	20-Oct-20	Transect	11:00	12:00	01:00	62°2.00' N	-85°54.00' E	62°1.00' N	-85°37.00' E	Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	20-Oct-20	Stationary	16:00			62°46.50' N	-92°5.60' E			Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	21-Oct-20	Transect	11:10	11:40	00:30	62°27.50' N	-81°52.90' E	62°31.70' N	-81°41.30' E	Moving	10	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	21-Oct-20	Transect	13:20	13:50	00:30	62°45.50' N	-81°1.70' E	62°47.80' N	-80°55.30' E	Moving	10	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	21-Oct-20	Transect	18:00	18:30	00:30	63°7.70' N	-79°57.10' E	63°10.00' N	-79°50.60' E	Moving	10	100% Cloud
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	21-Oct-20	Transect	11:00	12:00	01:00	62°39.00' N	-78°29.00' E	62°38.00' N	-78°4.00' E	Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	21-Oct-20	Stationary	16:00			62°46.60' N	-92°5.50' E			Stationary	10	Partly Cloudy
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	22-Oct-20	Transect	11:00	12:00	01:00	61°58.00' N	-70°21.00' E	61°55.00' N	-70°4.00' E	Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	22-Oct-20	Stationary	16:00			62°46.50' N	-92°5.60' E			Stationary	10	Partly Cloudy
Rigel Shipping	Maria Desgagnés/ Tanker	M Flynn	23-Oct-20	Transect	11:00	12:00	01:00	60°40.00' N	-63°50.00' E	60°35.00' N	-63°36.00' E	Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	23-Oct-20	Stationary	16:00			62°46.50' N	-92°5.60' E			Stationary	10	Partly Cloudy

Company/Agency	Platform Name and Type	Observers(s)	Date	Survey Type	Time at Start	Time at End	Effort	Start		End		Platform Activity	Visibility (km)	Weather
								Latitude	Longitude	Latitude	Longitude			
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	24-Oct-20	Stationary	16:00			62°46.50' N	-92°5.60' E			Stationary	10	Partly Cloudy
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Jean-Martin Houde	25-Oct-20	Transect	16:00	17:00	01:00	61°38.00' N	-67°9.90' E	61°30.56' N	-66°46.70' E	Moving	10	100% Cloud
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	Catherine Hetu	25-Oct-20	Transect	10:40	11:13	00:33	62°19.20' N	-69°12.30' E	62°14.70' N	-69°3.40' E	Moving	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	25-Oct-20	Stationary	16:00			62°10.10' N	-85°20.30' E			Stationary	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	26-Oct-20	Stationary	16:00			62°46.20' N	-73°30.10' E			Stationary	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	27-Oct-20	Stationary	13:00			60°7.10' N	-63°35.80' E			Stationary	10	Partly Cloudy
Desgagnés	Taiga Desgagnés/ Cargo	Charles-Hubert B Messier	27-Oct-20	Stationary	11:45			60°51.40' N	-64°33.40' E			Stationary	10	Partly Cloudy

Table F-1: Seabird Survey Data and Environmental Variables Recorded during 2020 MMSO Program (Part 2)

Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Coastal Shipping	Tuvaq W./ Tanker	18-Jun-20	Slight/ Grey	1	0.5	Light Wind	315	12	306	Port		Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	28-Jun-20	None/ Bright	2	1	Light Wind	90			Port		Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	05-Jul-20		2	0	Light Wind	180	12.7	336	Starboard and Port	25	Outdoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	06-Jul-20		3	0	Light Wind		11	247		20	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	06-Jul-20	None/ Bright	2	1	Light Wind	270			Starboard	30	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	07-Jul-20	None/ Bright	1	1	Light Wind				Port		Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	07-Jul-20		2	2	Light Wind	180	0			20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	08-Jul-20	None/ Bright	2	2	Light Wind	135	0			20	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	09-Jul-20		3	3	Light Wind	335	0			20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	10-Jul-20		2	2	Light Wind	45	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	10-Jul-20	None/ Bright	0	0	Calm	237	0			33	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	11-Jul-20		1	0	Light Wind	270	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	11-Jul-20	None/ Bright	0	0	Calm	225	0			33	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	12-Jul-20		1	0	Light Wind	180	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	12-Jul-20	None/ Bright	1	1	Light Wind	202	0			33	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	13-Jul-20		2	1	Light Wind	160	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	13-Jul-20						0			33	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	14-Jul-20		4	2	Light Wind	45	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	14-Jul-20	None/ Bright	3	1	Strong Wind	112	0			33	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	15-Jul-20		4	2	Light Wind	45	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	15-Jul-20	None/ Bright	3	1	Strong Wind	90	0			33	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	16-Jul-20	None/ Bright	1	1	Light Wind	170	14	300	Port	20	Outdoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	16-Jul-20		2	0	Light Wind	315	0			20	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	16-Jul-20	None/ Bright	1	0	Light Wind	340	0			33	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	17-Jul-20	Slight/ Grey	1	1	Light Wind	90	13.7	310	Starboard and Port	20	Outdoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	17-Jul-20		3	1	Light Wind	315	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	18-Jul-20	Slight/ Grey	1	1	Light Wind	45	14.3	265	Port	20	Outdoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	18-Jul-20	None/ Bright	1	0	Light Wind	105	11.5		Starboard	33	Both	Yes
Desgagnés	Taiga Desgagnés/ Cargo	18-Jul-20		4	1	Light Wind	340	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	19-Jul-20	None/ Bright	1	1	Light Wind	0	13.6	35	Port	20	Outdoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	19-Jul-20		1	1	Light Wind	0	0			20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	20-Jul-20		2	0	Light Wind	360	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	20-Jul-20	None/ Bright	0	0	Calm	120	0			20	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	21-Jul-20		3	1	Light Wind	315	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	21-Jul-20	None/ Bright	0	0	Light Wind	0	0			20	Indoors	Yes



Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Coastal Shipping	Tuvaq W./ Tanker	21-Jul-20	None/ Bright	0		Calm		0	310	Port		Indoors	Yes
Coastal Shipping	Tuvaq W./ Tanker	22-Jul-20	None/ Bright	0	0	Calm		8	234		10		Yes
Desgagnés	Taiga Desgagnés/ Cargo	22-Jul-20		1	0	Light Wind	90	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	22-Jul-20	None/ Bright	0	0	Calm	0	0			20	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	23-Jul-20		3	1	Light Wind	340	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	23-Jul-20	None/ Bright	0	0	Light Wind	0	0			20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	24-Jul-20		2	0	Light Wind	180	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	24-Jul-20	None/ Bright	2	2	Strong Wind	165	0			20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	25-Jul-20		3	1	Light Wind	45	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	25-Jul-20	None/ Bright	1	1	Strong Wind	160	0			20	Indoors	Yes
	Torm Camilla/ Oil/ Chemical	26-Jul-20		3	1	Light Wind							Yes
Desgagnés	Claude A Desgagnés/ Cargo	26-Jul-20	None/ Bright	2	1	Strong Wind	90	0			20	Indoors	No
	Torm Camilla/ Oil/ Chemical	27-Jul-20		3	1	Light Wind							Yes
Coastal Shipping	Tuvaq W./ Tanker	27-Jul-20	None	0	0	Calm	0	7.8	88	Port	28	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	27-Jul-20	None/ Bright	0	1	Light Wind	180	0			20	Indoors	No
Coastal Shipping	Tuvaq W./ Tanker	28-Jul-20	Slight/ Grey	0	0	Light Wind			260	Starboard	28	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	28-Jul-20	None/ Bright	1	1	Strong Wind	180	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	29-Jul-20	None/ Bright	1	1	Light Wind	40	0			20	Outdoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	30-Jul-20	None/ Bright	1	1	Strong Wind	0	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	31-Jul-20	None/ Bright	2	2	Strong Wind	0	0			20	Indoors	No
	Torm Camilla/ Oil/ Chemical	02-Aug-20		3	1	Light Wind							Yes
Desgagnés	Claude A Desgagnés/ Cargo	02-Aug-20	None/ Bright	1	1	Light Wind	0	0			20	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	02-Aug-20	Bright	1	0.1	Light Wind	225	0	225	Starboard	21	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	03-Aug-20	None/ Bright	1	1	Strong Wind	260				20	Indoors	Yes
coastal Shipping	Tuvaq W./ Tanker	03-Aug-20	None			Calm		8.5	320	Port	18	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	03-Aug-20	Slight/ Grey	1	0.1	Light Wind	247	0	247	Starboard	21	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	04-Aug-20	None/ Bright	4	2	Strong Wind	270	15.3			20	Indoors	No
	Torm Camilla/ Oil/ Chemical	04-Aug-20		3	1	Light Wind							No
Coastal Shipping	Kivalliq W./ Chemical Tanker	04-Aug-20	Slight/ Grey	2	0.2	Strong Wind	225	0	225	Starboard	21	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo ship	05-Aug-20	None	4	1	Strong Wind	90	15	270	Starboard	33	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	05-Aug-20	None	1	0.1	Light Wind	292	0	292	Starboard	21	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	06-Aug-20	None	1	0.3	Light Wind	205	12.7	230	Starboard	33	Indoors	No
Coastal Shipping	Tuvaq W./ Tanker	06-Aug-20	Slight/ Grey			Calm		7.5	348	Starboard	18	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	06-Aug-20	Slight/ Grey	0	0	Calm	315	0	315	Starboard	21	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical tanker	07-Aug-20	None	2	0.2	Light Wind		0	135		21		Yes
Rigel Shipping	Dara Desgagnés/ Tanker	08-Aug-20	None/ Bright	0	1	Calm		10	304	Starboard	22	Indoors	Yes

Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Coastal Shipping (Petro-Nav)	Kivalliq W./ Chemical Tanker	08-Aug-20	None	0	0	Calm		0	90	Port	25	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	08-Aug-20		1	0.1	Light Wind		0	202	Starboard	21	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	08-Aug-20	None	1	1	Light Wind	180	0		Port	33	Indoors	No
Rigel Shipping	Dara Desgagnés/ Tanker oil	09-Aug-20	Bright	2	1		115	0	165	Port	23	Indoors	Yes
Coastal Shipping	Kivalliq W./ Cheical tanker	09-Aug-20	Slight/ Grey	2	0.2	Light Wind		0	112	Starboard	21	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	09-Aug-20	None	1	1	Light Wind	112	0		Port	35	Indoors	No
Coastal Shipping	Kivalliq W./ Chemical tanker	10-Aug-20	Slight/ Grey	2	0.2	Strong Wind	90	0	90	Starboard	21	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	10-Aug-20	None	2	1	Light Wind	90	0	120	Starboard	35	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	11-Aug-20	Bright	1	0.1	Calm	0	0	0	Starboard	21	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	11-Aug-20	None	1	0.3	Calm		0		Port	35	Outdoors	No
Coastal Shipping	Kivalliq W./ Chemical Tanker	12-Aug-20	None	1	0.1	Strong Wind	0	0	0	Starboard	21	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	12-Aug-20	None	1	1	Light Wind	315	0		Port	35	Indoors	No
Coastal Shipping	Kivalliq W./ Chemical Tanker	13-Aug-20	Slight/ Grey	1	0.1	Light Wind	135	0	135	Starboard	21	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	13-Aug-20	None	1	1	Light Wind	180	0		Port	35	Indoors	No
Coastal Shipping	Kivalliq W./ Chemical Tanker	14-Aug-20	None	3	0.6	Light Wind	135	0	135	Starboard	21	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	14-Aug-20	None	2	1.5	Light Wind	135	0		Starboard	32	Indoors	No
Desgagnés	Zelada/ Cargo	15-Aug-20	None/ Bright	2	0	Light Wind	270	12.7	295	Bow	12	Indoors	Yes
Desgagnés	Zelada/ Cargo	15-Aug-20	None/ Bright	1	0	Light Wind	225	14	300	Starboard	12	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	15-Aug-20	None	1	0.3	Light Wind	145	12.5		Starboard	32	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical tanker	15-Aug-20		1	0.1	Light Wind		0	90	Starboard	21	Indoors	Yes
Desgagnés	Zelada/ Cargo	16-Aug-20	None/ Bright	1	0	Light Wind	180	9.4	269	Bow	12	Indoors	Yes
Desgagnés	Zelada/ Cargo	16-Aug-20	None/ Bright	2	0	Light Wind	205	12	342	Starboard	12	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Tanker	16-Aug-20	None	2	0.2	Strong Wind	315	0	315	Starboard	21	Indoors	No
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	16-Aug-20	None	2	1.5	Strong Wind	315	0	310	Starboard	32	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	17-Aug-20	None	2	1.5	Light Wind	315	4	313	Starboard	32	Outdoors	Yes
Desgagnés	Zelada/ Cargo	17-Aug-20		1	1	Light Wind		0		Starboard	12	Both	No
Coastal Shipping	Kivalliq W./ Chemical Tanker	17-Aug-20	None	3	0.6	Light Wind	315	0	315		21	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	18-Aug-20	None/ Bright		2	Strong Wind	150	12.5	317	Middle	20	Indoors	No
Torm	Torm Camilla/ Oil/Chemical Tanker	18-Aug-20				Light Wind			90	Starboard and Port	30	Indoors	Yes
Desgagnés	Zelada/ Cargo	18-Aug-20	Slight/ Grey	1	1	Light Wind	315	0		Starboard	12	Both	No
Coastal Shipping	Kivalliq W./ Chemical Tanker	18-Aug-20		1	0.1	Strong Wind	337	0	315	Starboard	21	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	18-Aug-20	None	1	1	Light Wind	315	0	320	Starboard	32	Indoors	Yes
Desgagnés	Zelada/ Cargo	19-Aug-20	None/ Bright	2	1	Light Wind	300	14	288	Bow	12	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	19-Aug-20	Slight/ Grey	4	2	Light Wind	90	12.4	284	Middle	20	Indoors	Yes
Coastal Shipping	Tuvaq W./ Tanker	19-Aug-20	Slight/ Grey	0	0	Calm	0		84	Starboard	30	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical tanker	19-Aug-20	Bright	0	0	Calm		0	315	Starboard	17	Indoors	No

Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	19-Aug-20	None			Calm		0		Starboard	32	Both	Yes
Desgagnés	Zelada/ Cargo	20-Aug-20	None/ Bright	1	0	Calm	90	13	280	Starboard	13	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20	None/ Bright	2	1	Strong Wind	0	11.1	263	Middle	20	Indoors	Yes
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	20-Aug-20	None	2	1.5	Light Wind	90	13	43	Starboard	32	Indoors	Yes
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20	Slight/ Grey	4	1.2	Strong Wind	350	13	60	Starboard and Port	30	Indoors	Yes
Coastal Shipping	Kivalliq W./ Chemical tanker	20-Aug-20	None	5	2	Gale Force Wind	140	0	133		19	Indoors	No
Desgagnés	Zelada/ Cargo	21-Aug-20	Slight/ Grey	5	2	Light Wind	135	14.5	280	Starboard	12	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	21-Aug-20	Slight/ Grey	2	2	Light Wind	180	11.3	293	Middle	20	Indoors	No
Desgagnés	Zelada/ Cargo	22-Aug-20	None/ Bright	1	1	Light Wind	0	0		Port	12	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	22-Aug-20	None/ Bright	1	1	Strong Wind	0	0			20	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20	None/ Bright	2	1	Light Wind	113	12.1	296	Starboard	30	Outdoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20	None/ Bright	1	1	Light Wind	20	12.8	295	Starboard	30	Outdoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20	Slight/ Grey	0	0	Calm	10	12.5	300	Starboard	30	Outdoors	Yes
Coastal Shipping	Kivalliq W./ Chemical Type II Tanker	23-Aug-20	Slight/ Grey	1	0.3	Light Wind	290	13.5	72	Starboard	12	Indoors	Yes
Desgagnés	Zelada/ Cargo	23-Aug-20	None/ Bright	1	0	Calm	300	0		Starboard	12	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	23-Aug-20	None/ Bright	0	1	Light Wind	300	0			20	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20	None/ Bright	2	1	Strong Wind	15		256	Starboard	30	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20	Slight/ Grey	1	1	Light Wind	30	12	274	Starboard	30	Outdoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20	None/ Bright	4	2	Light Wind	15	13.9	257	Port	30	Outdoors	Yes
Desgagnés	Zelada/ Cargo	24-Aug-20	None/ Bright	2	1	Strong Wind	315	14	100	Starboard and Port	22	Both	Yes
Desgagnés	Claude A Desgagnés/ Cargo	24-Aug-20	None/ Bright	0	0	Light Wind	0	0			20	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20	None/ Bright	2	1	Strong Wind	60	13.7	279	Starboard	30	Outdoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20	None/ Bright	2	1	Light Wind			279	Port	30	Outdoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20	None/ Bright	2	1	Calm		13.8	279	Starboard	30	Indoors	Yes
Desgagnés	Zelada/ Cargo	25-Aug-20	None/ Bright	2	0	Light Wind	270	10	87	Starboard	22	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	25-Aug-20	None/ Bright	0	0	Calm	0	0			20	Indoors	Yes
Desgagnés	Zelada/ Cargo	26-Aug-20	None/ Bright	2	1	Light Wind	270	8	87	Starboard	22	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	26-Aug-20	Slight/ Grey	0	0	Light Wind	150	0			20	Indoors	No
Desgagnés	Zelada/ Cargo	27-Aug-20	Slight/ Grey	2	1	Light Wind	45	7	112	Starboard	22	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	27-Aug-20	Slight/ Grey	0	0	Light Wind	180	0			20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	28-Aug-20	None/ Bright	1	1	Light Wind	180	0		Bow	20	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	29-Aug-20	Slight/ Grey	2	1	Strong Wind	270	0		Bow	20	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	30-Aug-20	Slight/ Grey	1	0	Light Wind	90	0		Bow	20	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	31-Aug-20		2	1	Gale Force Wind	120	0		Bow	20	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	01-Sep-20	None	3	1.5	Light Wind	205	10.5	293	Starboard	24	Indoors	Yes
Desgagnés	Claude A Desgagnés/ Cargo	01-Sep-20	Slight/ Grey	3	1	Gale Force Wind	120	0		Bow	20	Indoors	No

Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Desgagnés	Claude A Desgagnés/ Cargo	02-Sep-20	Slight/ Grey	5	2	Strong Wind	330	14.8	113	Bow	20	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	02-Sep-20	None	4	1.5	Light Wind	195	11.2	273	Port	24	Indoors	No
Desgagnés	Claude A Desgagnés/ Cargo	03-Sep-20	None/ Bright	3	1	Light Wind	90	15.6	90	Bow	20	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	03-Sep-20	None	4	1.5	Light Wind		11	293	Starboard	24	Indoors	No
Desgagnés	Miena Desgagnés/ Multi purpose	04-Sep-20	None	2	1.5	Light Wind	0	12.1	300	Port	24	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	05-Sep-20	None	3	0.5	Strong Wind	345	0	5	Port	24	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	06-Sep-20	None	3	0.4	Strong Wind	15	0	15	Port	24	Indoors	No
Desgagnés	Miena Desgagnés/ Multi purpose	07-Sep-20	Bright	0	0.3	Strong Wind	15	0	350	Port	24	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	08-Sep-20	None	2	0.3	Light Wind	40	12.5	202	Port	24	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	09-Sep-20	None	7	0.8	Strong Wind	170	0	170	Port	25	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	10-Sep-20	None/ Bright	2	1	Strong Wind	200	12.6	90	Starboard	30	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	10-Sep-20	None	3	0.3	Strong Wind	340	0	345	Starboard	26	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20	Slight/ Grey	4	2	Strong Wind	190	14	143	Starboard	30	Indoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20	None/ Bright	2	0	Light Wind	195	15.2	105	Starboard	30	Outdoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20	None/ Bright	3	1	Strong Wind	195	13.3	117	Port	30	Outdoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	11-Sep-20	Bright	2	0.2	Light Wind	310	0	320	Starboard	26	Indoors	Yes
Desgagnés	Zelada/ Cargo	12-Sep-20	None/ Bright	2	1	Light Wind	45	13	294	Starboard and Port	26	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	12-Sep-20	None	2	0.15	Light Wind	50	0	70	Port	26	Indoors	Yes
Desgagnés	Zelada/ Cargo	13-Sep-20	Slight/ Grey	4	1	Strong Wind	90	13	275	Starboard and Port	26	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	13-Sep-20	None	3	1.5	Light Wind	275	12	102	Starboard	26	Indoors	No
Desgagnés	Zelada/ Cargo	14-Sep-20	Slight/ Grey	4	1	Strong Wind	315	13	260	Starboard and Port	26	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	14-Sep-20	None	2	1.5	Light Wind	354	8.5	73	Port	26	Indoors	Yes
Desgagnés	Miena Desgagnés/ Multi purpose	15-Sep-20	None	5	2	Light Wind	303	10	112	Starboard	26	Indoors	Yes
Desgagnés	Zelada/ Cargo	15-Sep-20	Slight/ Grey	2	1	Strong Wind	240	0		Starboard	26	Indoors	No
Desgagnés	Zelada/ Cargo	16-Sep-20	Slight/ Grey	3	1	Strong Wind	0	0		Starboard	26	Indoors	No
Desgagnés	Zelada/ Cargo	17-Sep-20	Slight/ Grey	3	1	Strong Wind	315	0		Starboard	26	Indoors	No
Desgagnés	Zelada/ Cargo	18-Sep-20	Slight/ Grey	1	1	Light Wind	270	0		Starboard	26	Indoors	No
Rigel Shipping	Dara Desgagnés/ Oil tanker	19-Sep-20				Strong Wind		12.6	289		19	Indoors	Yes
Rigel Shipping	Dara Desgagnés/ Oil tanker	19-Sep-20	None	2	1	Strong Wind	258	12.6	289		19	Indoors	No
Desgagnés	Zelada/ Cargo	19-Sep-20	Slight/ Grey	1	1	Light Wind	275	0		Starboard and Port	26	Both	No
Rigel Shipping	Dara Desgagnés/ Oil tanker	20-Sep-20	None	2	1	Light Wind	135	11.2	276		19	Indoors	No
Desgagnés	Zelada/ Cargo	20-Sep-20	Slight/ Grey	3	1	Strong Wind	270	0		Starboard	26	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	21-Sep-20	None/ Bright	3	1	Strong Wind	203	10.9	302	Starboard	33	Indoors	Yes
Desgagnés	Zelada/ Cargo	21-Sep-20	Slight/ Grey	2	1	Strong Wind	70	0		Starboard	26	Indoors	No
Rigel Shipping	Dara Desgagnés/ Oil tanker	21-Sep-20	None	3	1	Strong Wind	90	0			19	Indoors	No
Rigel Shipping	Dara Desgagnés/ Oil tanker	22-Sep-20		3	1	Strong Wind	45	11.8	204		19		No

Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Desgagnés	Zelada/ Cargo	22-Sep-20	Slight/ Grey	2	1	Light Wind	60	0		Starboard and Port	26	Both	Yes
Transarctik	Nordika Desgagnés/ Cargo	22-Sep-20	None/ Bright	3	1	Strong Wind	45	0	25	Starboard	33	Indoors	Yes
Desgagnés	Zelada/ Cargo	23-Sep-20	Slight/ Grey	2	1	Light Wind	300	0		Starboard and Port	26	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	23-Sep-20	None/ Bright	2	1	Light Wind	48	0	36	Starboard	33	Indoors	Yes
Rigel Shipping	Dara Desgagnés/ Oil tanker	23-Sep-20	None	1	1	Light Wind	315	0	256		19	Indoors	No
Desgagnés	Zelada/ Cargo	24-Sep-20	Slight/ Grey	2	1	Light Wind	310	13.5	81	Starboard	26	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	24-Sep-20	None/ Bright	2	0	Strong Wind	42	0	21	Starboard	33	Indoors	No
Desgagnés	Zelada/ Cargo	25-Sep-20	Slight/ Grey	4	1	Strong Wind	315	14.5	95	Starboard	26	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	25-Sep-20	None/ Bright	3	1	Strong Wind	180	13.3	269	Starboard	33	Indoors	No
Desgagnés	Zelada/ Cargo	26-Sep-20	None/ Bright	4	1	Calm	270	14	110	Starboard	26	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	26-Sep-20	None/ Bright	4	2	Strong Wind	72	0	80	Starboard	33	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	27-Sep-20	None/ Bright	5	2	Strong Wind	45	12.9	80	Starboard	33	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	28-Sep-20	None/ Bright	1	0	Light Wind	312	0	151	Starboard	33	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20	Slight/ Grey	2	1	Light Wind	45	13	296	Starboard	30	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20	None/ Bright	2	1	Light Wind	75	12.8	298	Starboard	30	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	29-Sep-20	None/ Bright	3	1	Strong Wind	270	0	88	Starboard	33	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	30-Sep-20	None/ Bright	2	0	Light Wind	220	0	303	Starboard	33	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	01-Oct-20	None/ Bright	1	0	Light Wind	325	0	293	Starboard	33	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	02-Oct-20	None/ Bright	1	0	Light Wind	318	0	275	Starboard	33	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	03-Oct-20	None/ Bright	2	0	Light Wind	320	0	305	Starboard	33	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	04-Oct-20	None/ Bright	2	0	Calm	42	0	12	Starboard	33	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	05-Oct-20	None/ Bright	1	0	Light Wind	45	0	31	Starboard	33	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	06-Oct-20	None/ Bright	2	0	Strong Wind	180	0	326	Starboard	33	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	07-Oct-20	None/ Bright	4	2	Gale Force Wind	180	0	314	Starboard	33	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	08-Oct-20	None/ Bright	2	1	Strong Wind	190	0	3	Starboard	33	Indoors	Yes
Rigel Shipping	Maria Desgagnés/ Tanker	09-Oct-20	None	4	1	Light Wind	45	13	302	Starboard	20	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	09-Oct-20	None/ Bright	1	0	Light Wind	135	0	84	Starboard	33	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	10-Oct-20	None/ Bright	1	0	Light Wind	135	0	27	Starboard	33	Indoors	Yes
Rigel Shipping	Maria Desgagnés/ Tanker	10-Oct-20	None	4	1	Light Wind	335	0	340	Starboard	20	Indoors	No
Transarctik	Nordika Desgagnés/ Cargo	11-Oct-20	None/ Bright	2	0	Strong Wind	135	14.2	114	Starboard	33	Indoors	Yes
Rigel Shipping	Maria Desgagnés/ Tanker	11-Oct-20	None	4	1	Light Wind	135	13	205	Starboard	18	Indoors	Yes
Transarctik	Nordika Desgagnés/ Cargo	12-Oct-20	None/ Bright	3	0	Light Wind	90	14.8	116	Starboard	33	Indoors	Yes
Rigel Shipping	Maria Desgagnés/ Tanker	12-Oct-20	None	6	2	Gale Force Wind	95	0	100	Starboard	18	Indoors	No
Rigel Shipping	Maria Desgagnés/ Tanker	13-Oct-20	None	5	2	Strong Wind	135	0	130	Port	18	Indoors	No
Rigel Shipping	Maria Desgagnés/ Tanker	14-Oct-20	None	5	2	Strong Wind	135	0	135	Port	18	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	15-Oct-20	None/ Bright	5	2	Light Wind	225	0			25	Indoors	No



Company/Agency	Platform Name and Type	Date	Glare Conditions	Sea State Code	Wave Height (m)	Wind Speed (Beaufort)	Wind Direction (°)	Platform Speed (kt)	Platform Direction (°)	Observation Side	Height of Eye (m)	Outdoors or Indoors?	Species Observed?
Desgagnés	Taiga Desgagnés/ Cargo	15-Oct-20	None/ Bright	3	1	Light Wind	292	0			25	Indoors	No
Rigel Shipping	Maria Desgagnés/ Tanker	15-Oct-20	None	4	1.5	Strong Wind	145	0	135	Starboard	18	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	16-Oct-20	Slight/ Grey	3	1	Light Wind	340	0			25	Indoors	No
	Maria Desgagnés/	16-Oct-20				7	90	0	95				Yes
Desgagnés	Taiga Desgagnés/ Cargo	17-Oct-20	None/ Bright	3	1	Light Wind	225	0			25	Indoors	No
	Maria Desgagnés/	17-Oct-20				3	45	0	200				Yes
Desgagnés	Taiga Desgagnés/ Cargo	18-Oct-20	Slight/ Grey	2	1	Light Wind	0	0			25	Indoors	No
	Maria Desgagnés/	18-Oct-20				1		0	200				Yes
Rigel Shipping	Maria Desgagnés/ Tanker	19-Oct-20	None	3	1	Light Wind	320	9	100	Port	20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	19-Oct-20	None/ Bright	1	0	Light Wind	315	0			25	Indoors	No
Rigel Shipping	Maria Desgagnés/ Tanker	20-Oct-20	None	4	1	Light Wind	260	8	100	Starboard	20	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	20-Oct-20	None/ Bright	2	1	Light Wind	315	0			25	Indoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	21-Oct-20	Slight/ Grey	4	1	Light Wind	245	15	53	Starboard	30	Indoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	21-Oct-20	None/ Bright	4	2	Strong Wind	268	8	56	Starboard	30	Indoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	21-Oct-20	None/ Bright	5	2	Strong Wind	240	8.3	53	Starboard	30	Indoors	No
Rigel Shipping	Maria Desgagnés/ Tanker	21-Oct-20	None	5	2	Strong Wind	225	9	92	Starboard	20	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	21-Oct-20	Slight/ Grey	3	1	Light Wind	270	0			25	Indoors	No
Rigel Shipping	Maria Desgagnés/ Tanker	22-Oct-20	None	4	1	Light Wind	230	8	111	Starboard	20	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	22-Oct-20	Slight/ Grey	3	1	Light Wind	315	0			25	Indoors	Yes
Rigel Shipping	Maria Desgagnés/ Tanker	23-Oct-20	None	5	1.5	Strong Wind	260	10	129	Starboard	20	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	23-Oct-20	Slight/ Grey	3	1	Light Wind	340	0			25	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	24-Oct-20	None/ Bright	2	1	Light Wind	315	0			25	Indoors	No
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Oct-20	None/ Bright	4	1	Strong Wind	300	14.4	324	Port	30	Indoors	Yes
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Oct-20	Slight/ Grey	2	1	Light Wind	270	14.7	136	Starboard	30	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	25-Oct-20	Slight/ Grey	3	2	Light Wind	22	0			25	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	26-Oct-20	Slight/ Grey	3	2	Light Wind	315	0			25	Indoors	No
Desgagnés	Taiga Desgagnés/ Cargo	27-Oct-20	Slight/ Grey	3	1	Light Wind	315	0			25	Indoors	Yes
Desgagnés	Taiga Desgagnés/ Cargo	27-Oct-20	Slight/ Grey	3	2	Strong Wind	270	0			25	Indoors	Yes

## **APPENDIX G      SEABIRD OBSERVATION DATA 2020**

Appendix G: Seabird Observation Data 2020

Table G-1: Seabird Sightings Recorded during 2020 MMSO Program

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Coastal Shipping	Tuvaq W./ Tanker	18-Jun-20		Unknown Gull	1	Fly		400	E			Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	28-Jun-20		Unknown Falcon	1		Yes		B	Other			
Desgagnés	Taiga Desgagnés/ Cargo	05-Jul-20		Northern Fulmar	5	Fly	Yes		B	Other			Non-breeding
Desgagnés	Taiga Desgagnés/ Cargo	06-Jul-20		Northern Fulmar	27	Fly	Yes		B	Other	45		Non-breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	06-Jul-20		Thick-billed Murre	8	Fly	Yes		C	Other	315	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	06-Jul-20		Unknown Gull	3	Fly	Yes		B	Other	270	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	07-Jul-20		Thick-billed Murre	80	Fly	Yes		B	Other	270	Adult	
Desgagnés	Taiga Desgagnés/ Cargo	08-Jul-20		Thick-billed Murre	15	Both	Yes		B	Other			
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	10-Jul-20	17:03	Unknown Gull	7	Fly			D	Other	225	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	10-Jul-20	17:15	Black-legged Kittiwake	1	Fly			B	Other	0	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	10-Jul-20	18:05	Sandhill Crane	1	Fly			B	Other	45	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	10-Jul-20	18:45	Black-legged Kittiwake	1	Fly			A	Other	45	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	11-Jul-20	18:05	Black-legged Kittiwake	1	Fly			B	Other	225	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	11-Jul-20	19:08	Black Guillemot	1	Water			B	Other	0	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	11-Jul-20	19:37	Unknown Gull	4	Fly			C	Other	45	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	12-Jul-20		Unknown Gull	1	Fly			A	Other	22	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	12-Jul-20	17:48	Black-legged Kittiwake	2	Fly			B	Other	270	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	12-Jul-20	18:03	Thick-billed Murre	1	Both			B	Other	0		
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	13-Jul-20	17:12	Black Guillemot	2	Both			C	Other	315	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	13-Jul-20	17:18	Unknown Gull	1	Fly			A	Other	135	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	13-Jul-20	18:33	Northern Fulmar	1	Fly			B	Other	202	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	15-Jul-20	17:47	Black-legged Kittiwake	1	Fly			A	Other	315	Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	16-Jul-20	17:08	Unknown Gull	4	Fly			C	Other	0		
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	16-Jul-20	18:56	Black-legged Kittiwake	1	Fly			A	Other	315	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	16-Jul-20		Northern Fulmar	5	Water	No		C	Other	0		
Desgagnés	Claude A Desgagnés/ Cargo	16-Jul-20		Least Sandpiper	1		No		A	Other	0		
Desgagnés	Claude A Desgagnés/ Cargo	16-Jul-20		Northern Fulmar	1	Fly	No		A	Other	0		
Desgagnés	Claude A Desgagnés/ Cargo	17-Jul-20		Glaucous Gull	1	Fly	No		C	Other	225		
Desgagnés	Claude A Desgagnés/ Cargo	17-Jul-20		Glaucous Gull	1	Fly	No		C	Other	225		
Desgagnés	Claude A Desgagnés/ Cargo	17-Jul-20		Sabine's Gull	3	Fly	No		B	Other	0		
Desgagnés	Claude A Desgagnés/ Cargo	17-Jul-20		Herring Gull	1	Fly	No		A	Other	180		
Desgagnés	Claude A Desgagnés/ Cargo	18-Jul-20		Unknown	5	Water	No		D	Other			

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Desgagnés	Claude A Desgagnés/ Cargo	18-Jul-20		Unknown	3	Water	No		E	Other			
Desgagnés	Claude A Desgagnés/ Cargo	18-Jul-20		Pomarine Jaeger	15	Fly			B	Other	270		
Desgagnés	Claude A Desgagnés/ Cargo	18-Jul-20		Pomarine Jaeger	10	Fly			C	Other	225		
Desgagnés	Claude A Desgagnés/ Cargo	18-Jul-20		Unknown	5	Fly			A	Other	0		
Desgagnés/ Transarctik	Nordika Desgagnés/ Cargo	18-Jul-20		Dovekie	3	Fly	Yes		A	Other	338	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	19-Jul-20		Glaucous Gull	1	Water			A	Other			
Desgagnés	Claude A Desgagnés/ Cargo	20-Jul-20		Northern Fulmar	19	Water			E	Other			
Desgagnés	Claude A Desgagnés/ Cargo	20-Jul-20		Arctic Tern	1	Fly			A	Other			
Desgagnés	Claude A Desgagnés/ Cargo	20-Jul-20		Northern Fulmar	30				E	Other			
Desgagnés	Claude A Desgagnés/ Cargo	21-Jul-20		Peregrine Falcon	1				B	Other			
Coastal Shipping	Tuvaq W./ Tanker	21-Jul-20		Peregrine Falcon	1	Fly	No		A	Other		Adult	
Coastal Shipping	Tuvaq W./ Tanker	22-Jul-20		White-winged Scoter	5	Fly	Yes		A	Escape Flight	270		
Desgagnés	Claude A Desgagnés/ Cargo	22-Jul-20		Northern Fulmar	5	Fly			C	Other			
Desgagnés	Claude A Desgagnés/ Cargo	25-Jul-20		Northern Fulmar	10	Fly			D	Other			
	Torm Camilla/ Oil/ Chemical	26-Jul-20		Common Murre	2				B	Feeding		Adult	
	Torm Camilla/ Oil/ Chemical	26-Jul-20		Parasitic Jaeger	6				B	Travel		Adult	
	Torm Camilla/ Oil/ Chemical	27-Jul-20		Parasitic Jaeger	4				C	Travel		Adult	
Coastal Shipping	Tuvaq W./ Tanker	27-Jul-20		Black Scoter	2	Water	Yes	160	C	Other		Adult	
Coastal Shipping	Tuvaq W./ Tanker	28-Jul-20		Glaucous Gull	1	Fly	Yes	300	D	Other	264	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	29-Jul-20		Unknown Falcon	1				B	Other			
	Torm Camilla/ Oil/ Chemical	02-Aug-20		Parasitic Jaeger	1				C	Travel		Young	
	Torm Camilla/ Oil/ Chemical	02-Aug-20		Great Cormorant	6				C	Feeding			
Desgagnés	Claude A Desgagnés/ Cargo	02-Aug-20		Northern Fulmar	10	Both			E	Other	0		
	Torm Camilla/ Oil/ Chemical	02-Aug-20		Northern Fulmar	20				B	Feeding		Adult	
Desgagnés	Claude A Desgagnés/ Cargo	03-Aug-20		Northern Fulmar	2	Fly			C	Other	180	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	03-Aug-20		Northern Fulmar	5	Fly			A	Other	135		
coastal Shipping	Tuvaq W./ Tanker	03-Aug-20		Common Loon	1	Water		300	D	Other		Adult	
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo ship	05-Aug-20		Great Skua	2	Fly	Yes	200	C	Other	245	Adult	Breeding
Coastal Shipping	Kivalliq W./ Chemical Tanker	06-Aug-20		Herring Gull	1	Water	Yes	50	A	Rafting		Adult	Breeding
Coastal Shipping	Tuvaq W./ Tanker	06-Aug-20		Common Loon	1	Water		500	E	Swimming		Adult	
Coastal Shipping	Kivalliq W./ Chemical tanker	07-Aug-20		Herring Gull	1	Water	Yes	50	A	Rafting		Adult	Breeding
Rigel Shipping	Dara Desgagnés/ Tanker	08-Aug-20		Herring Gull	20	Both	No	500	D	Feeding		Adult	Non-breeding
Rigel Shipping	Dara Desgagnés/ Tanker	08-Aug-20		Red-breasted Merganser	2	Fly	No	600	E	Other	45	Adult	Non-breeding
Rigel Shipping	Dara Desgagnés/ Tanker	08-Aug-20		Unknown Gull	5	Both	No	500	E	Other		Adult	Non-breeding
Coastal Shipping (Petro-Nav)	Kivalliq W./ Chemical Tanker	08-Aug-20		Glaucous Gull	1	Water	No	150	C	Feeding		Adult	Breeding
Coastal Shipping	Kivalliq W./ Chemical Tanker	08-Aug-20		Herring Gull	1	Water	Yes	50	A	Rafting		Adult	Breeding

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Rigel Shipping	Dara Desgagnés/ Tanker oil	09-Aug-20		Herring Gull	6	Water	No	300	D	Rafting		Adult	Non-breeding
Rigel Shipping	Dara Desgagnés/ Tanker oil	09-Aug-20		Herring Gull	2	Water	No	600	E	Rafting		Adult	Non-breeding
Coastal Shipping	Kivalliq W./ Cheical tanker	09-Aug-20		Herring Gull	1	Water	Yes	50	A	Rafting		Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	10-Aug-20		Leach's Storm-petrel	1	Fly	Yes	250	D	Other		Adult	
Coastal Shipping	Kivalliq W./ Chemical Tanker	11-Aug-20		Herring Gull	2	Water	Yes	30	A	Rafting		Adult	Breeding
Coastal Shipping	Kivalliq W./ Chemical Tanker	12-Aug-20		Herring Gull	2	Water	Yes	30	A	Rafting		Adult	Breeding
Coastal Shipping	Kivalliq W./ Chemical Tanker	13-Aug-20		Herring Gull	2	Water	Yes	25	A	Rafting		Adult	Breeding
Desgagnés	Zelada/ Cargo	15-Aug-20		Glaucous Gull	10	Fly	Yes		A	Other	295	Adult	
Desgagnés	Zelada/ Cargo	15-Aug-20		Glaucous Gull	6	Fly	Yes		A	Other	295	Young	
Desgagnés	Zelada/ Cargo	15-Aug-20		Northern Fulmar	4	Both	Yes		A	Other		Adult	
Desgagnés	Zelada/ Cargo	15-Aug-20		Iceland Gull	4	Fly	Yes		A	Other		Adult	
Desgagnés	Zelada/ Cargo	15-Aug-20		Sooty Shearwater	2	Water	Yes		A	Other	0	Adult	
Desgagnés	Zelada/ Cargo	15-Aug-20		Thick-billed Murre	2	Water	Yes		B	Other		Young	
Coastal Shipping	Kivalliq W./ Chemical tanker	15-Aug-20		Herring Gull	1	Water	Yes	35	A	Rafting		Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	15-Aug-20		Northern Fulmar	3	Fly	Yes	250	D	Other	300	Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	15-Aug-20		Pomarine Jaeger	1	Fly	Yes	300	D	Other	150	Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	15-Aug-20		Great Cormorant	2	Fly	Yes	150	C	Other	270	Adult	Breeding
Desgagnés	Zelada/ Cargo	16-Aug-20		Northern Fulmar	1	Fly	Yes		B	Other	270		
Desgagnés	Zelada/ Cargo	16-Aug-20		Black-legged Kittiwake	1	Fly	Yes		C	Other	190	Young	
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	16-Aug-20		Northern Fulmar	5	Fly	Yes	300	D	Other	270	Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	17-Aug-20		Northern Fulmar	2	Fly	Yes	350	E	Other	45	Adult	Breeding
Coastal Shipping	Kivalliq W./ Chemical Tanker	18-Aug-20		Herring Gull	1	Water	Yes	40	A	Rafting		Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	18-Aug-20		Northern Fulmar	2	Fly	Yes	350	E	Other	200	Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	18-Aug-20		Northern Fulmar	1	Water	No	500	E			Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General cargo	18-Aug-20		Northern Fulmar	1	Fly	Yes	250	D	Other	35	Adult	Breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	18-Aug-20		Herring Gull	5	Fly	No	600	E	Rafting	340	Adult	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	18-Aug-20		Unknown Gull	1	Fly	No	1000	E	Rafting	290	Adult	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	18-Aug-20		Herring Gull	2	Fly	No	500	E	Rafting	100	Adult	Non-breeding
Desgagnés	Claude A Desgagnés/ Cargo	19-Aug-20		Northern Fulmar	3	Fly	No		D	Other	45		
Desgagnés	Claude A Desgagnés/ Cargo	19-Aug-20		Northern Fulmar	1	Fly	No		E	Other	215		
Desgagnés	Claude A Desgagnés/ Cargo	19-Aug-20		Northern Fulmar	2	Fly	No		E	Other	0		
Desgagnés	Claude A Desgagnés/ Cargo	19-Aug-20		Northern Fulmar	5	Fly	No		E	Other	0		
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	19-Aug-20		Northern Fulmar	2	Fly	Yes	250	D	Other	90	Adult	Breeding
Coastal Shipping	Tuvaq W./ Tanker	19-Aug-20		Unknown Duck	1	Water	Yes	200	C	Other		Adult	
Coastal Shipping	Tuvaq W./ Tanker	19-Aug-20		Unknown Duck	2	Water	Yes	200	C	Other		Young	
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Unknown	15	Fly	No		E	Other	180		



Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Northern Fulmar	3	Fly	No		E	Other	135		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Northern Fulmar	5	Fly	No		B	Other	180		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Pomarine Jaeger	3	Fly	No		B	Other	180		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Pomarine Jaeger	10	Fly	No		B	Other	135		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Pomarine Jaeger	2	Fly	No		B	Other	180		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Pomarine Jaeger	1	Fly	No		B	Other	180		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Sabine's Gull	2	Water	No		A	Other			
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Northern Fulmar	1	Fly	No		B	Other	180		
Desgagnés	Claude A Desgagnés/ Cargo	20-Aug-20		Pomarine Jaeger	2	Fly	No		B	Other	45		
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	20-Aug-20		Pomarine Jaeger	2	Both		350	E	Other	136	Adult	Breeding
Desgagnés/ Transarctik	Nordika Desgagnés/ General Cargo	20-Aug-20		Herring Gull	1	Fly	Yes	200	C	Other	180	Adult	Breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Northern Fulmar	6	Fly	No	100	B	Rafting	30	Adult	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Northern Fulmar	20	Fly	Yes	100	B	Rafting	330	Adult	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Unknown Gull	2	Fly	Yes	100	B	Rafting	330	Adult	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Unknown Gull	8	Fly	Yes	150	C	Rafting	120	Adult	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Northern Fulmar	29	Water	No	200	C	Rafting	120		Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Parasitic Jaeger	2	Fly	Yes	150	C	Rafting	120	Young	Non-breeding
Torm	Torm Camilla/ Oil/Chemical Tanker	20-Aug-20		Northern Fulmar	8	Fly	Yes	150	C	Rafting	80	Young	Non-breeding
Desgagnés	Claude A Desgagnés/ Cargo	22-Aug-20		Northern Fulmar	30	Water			E	Other			
Desgagnés	Claude A Desgagnés/ Cargo	22-Aug-20		Razorbill	1	Fly			A	Other			
Desgagnés	Claude A Desgagnés/ Cargo	23-Aug-20		Northern Fulmar	2	Fly			B	Other	0		
Desgagnés	Claude A Desgagnés/ Cargo	23-Aug-20		Razorbill	1				A	Other			
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Northern Fulmar	4	Fly	Yes		A	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Unknown Gull	12	Water	Yes		B	Rafting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Unknown Gull	3	Fly	Yes		A	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Northern Fulmar	2	Fly	Yes		A	Other	120	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Great Skua	1	Fly	Yes		A	Other	115	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Unknown Murre	2	Water	Yes		A	Resting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Unknown Gull	3	Fly	Yes		B	Other	300	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Razorbill	1	Water	Yes		A	Rafting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Unknown	11	Water	Yes		B	Rafting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Unknown	4	Fly	Yes		C	Other	180		
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Northern Fulmar	4	Fly	Yes		A	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	23-Aug-20		Razorbill	1	Water	Yes		A	Rafting		Young	
Coastal Shipping	Kivalliq W./ Chemical Type II Tanker	23-Aug-20		Common Eider	75	Water	No	120	C	Rafting		Adult	Breeding
Desgagnés	Zelada/ Cargo	24-Aug-20		Unknown	2	Fly	Yes		D	Other	135		

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Desgagnés	Zelada/ Cargo	24-Aug-20		Thayer's Gull	1	Fly	Yes		B	Other	270		
Desgagnés	Claude A Desgagnés/ Cargo	24-Aug-20		Unknown Murre	2	Water	Yes		A	Rafting		Adult	
Desgagnés	Claude A Desgagnés/ Cargo	24-Aug-20		Unknown Murre	2	Water	Yes		A	Rafting		Adult	
Desgagnés	Claude A Desgagnés/ Cargo	24-Aug-20		Unknown Murre	2	Fly	Yes		A	Escape Flight	0	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown Gull	14	Fly	Yes		E	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown	3	Fly	Yes		D	Other	256	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown Gull	4	Fly	Yes		D	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Great Skua	1	Fly	Yes		D	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Dovekie	1	Fly	Yes		C	Other	256		
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Northern Fulmar	3	Fly	Yes		A	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown Murre	5	Water	Yes		A	Rafting	340	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Great Shearwater	1	Fly	Yes		A	Other	330	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown Murre	2	Fly	Yes		A	Escape Flight	15	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown Murre	1	Water	Yes		A	Rafting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	24-Aug-20		Unknown Murre	1	Water	Yes		A	Rafting		Young	
Desgagnés	Claude A Desgagnés/ Cargo	25-Aug-20		Unknown	6	Fly			A	Other			
Desgagnés	Claude A Desgagnés/ Cargo	25-Aug-20		Razorbill	1				A	Other			
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20		Unknown	2	Fly	Yes		E	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20		Unknown Gull	1	Water	Yes		B	Rafting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20		Unknown Gull	2	Fly	Yes		B	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Aug-20		Unknown Gull	1	Fly	Yes		B	Other		Young	
Desgagnés	Zelada/ Cargo	27-Aug-20		Pomarine Jaeger	1	Fly	Yes		A	Other	110	Adult	
Desgagnés	Zelada/ Cargo	27-Aug-20		Northern Fulmar	1	Fly	Yes		B	Other	340	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	29-Aug-20		Northern Fulmar	1	Fly	Yes		B	Other	0	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	29-Aug-20		Northern Fulmar	3	Fly	Yes		D	Other	0	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	30-Aug-20		Northern Fulmar	4	Fly	No		C	Other	270		
Desgagnés	Claude A Desgagnés/ Cargo	30-Aug-20		Unknown Sandpiper	2	Fly	No		B	Other			
Desgagnés	Claude A Desgagnés/ Cargo	31-Aug-20		Peregrine Falcon	1	Fly	No			Other			
Desgagnés	Miena Desgagnés/ Multi purpose	01-Sep-20		Northern Fulmar	20	Both	Yes	110	C	Escape Flight	292	Adult	Breeding
Desgagnés	Claude A Desgagnés/ Cargo	02-Sep-20		Northern Fulmar	3	Fly	Yes		C	Other	180	Adult	
Desgagnés	Claude A Desgagnés/ Cargo	03-Sep-20		Northern Fulmar	3	Fly	Yes		B	Other	0	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	04-Sep-20		Snow Goose	10	Fly	No	250	D	Other	0	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	05-Sep-20		Cackling/Canada Goose	14	Fly	Yes	300	D	Other	110		
Desgagnés	Miena Desgagnés/ Multi purpose	07-Sep-20		Snow Goose	11	Fly	Yes	250	D	Other	100		
Desgagnés	Miena Desgagnés/ Multi purpose	08-Sep-20		Herring Gull	4	Fly	No	200	C	Other	220	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	08-Sep-20		Herring Gull	2	Water	No	100	B	Feeding		Adult	

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Desgagnés	Miena Desgagnés/ Multi purpose	09-Sep-20		Snow Goose	9	Fly	Yes	250	D	Other	90		
Desgagnés	Miena Desgagnés/ Multi purpose	09-Sep-20		Herring Gull	6	Fly	No	50	A	Other		Young	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	10-Sep-20		Northern Fulmar	1	Fly	Yes		A	Other	270	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	10-Sep-20		Parasitic Jaeger	1	Fly	Yes		A	Escape Flight			
Desgagnés	Miena Desgagnés/ Multi purpose	10-Sep-20		Snow Goose	52	Fly	Yes	300	D	Other	220		
Desgagnés	Miena Desgagnés/ Multi purpose	10-Sep-20		Herring Gull	8	Fly	No	200	C	Escape Flight		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Unknown Gull	18	Both	Yes		B	Other	120	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Unknown Gull	3	Both	Yes		B	Other	120	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Unknown	10	Fly	Yes		E	Other	30	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Unknown	1	Fly	Yes		A	Other	120	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Great Skua	3	Both	Yes		A	Other	120	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Northern Fulmar	40	Both	Yes		C	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	11-Sep-20		Great Skua	40	Both	Yes		C	Other		Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	11-Sep-20		Snow Goose	47	Fly	Yes	300	D	Other	190	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	11-Sep-20		Cackling/Canada Goose	11	Fly	Yes	100	B	Other	210	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	11-Sep-20		Herring Gull	4	Fly	No	60	B	Escape Flight		Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	11-Sep-20		Herring Gull	2	Water	No	4	A			Adult	
Desgagnés	Zelada/ Cargo	12-Sep-20		Herring Gull	8	Fly	No		A	Other	315		
Desgagnés	Zelada/ Cargo	12-Sep-20		Northern Fulmar	5	Fly	Yes		A	Other	90	Adult	
Desgagnés	Zelada/ Cargo	12-Sep-20		Herring Gull	3	Fly	Yes		A	Other	290	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	12-Sep-20		Herring Gull	18	Fly	No	100	B	Other			
Desgagnés	Miena Desgagnés/ Multi purpose	12-Sep-20		Snow Goose	57	Fly	Yes	200	C	Other			
Desgagnés	Zelada/ Cargo	13-Sep-20		Unknown Gull	4	Fly	No		C	Other	0		
Desgagnés	Zelada/ Cargo	13-Sep-20		Unknown	1	Fly	No		B	Other	90		
Desgagnés	Zelada/ Cargo	13-Sep-20		Unknown Gull	3	Fly	No		C	Other	150		
Desgagnés	Zelada/ Cargo	14-Sep-20		Unknown Falcon	1	Fly	Yes		A	Other	270		
Desgagnés	Miena Desgagnés/ Multi purpose	14-Sep-20		Northern Fulmar	42	Fly	No	70	B	Other	80	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	14-Sep-20		Glaucous Gull	1	Fly	No	50	A	Other	74	Adult	
Desgagnés	Miena Desgagnés/ Multi purpose	15-Sep-20		Northern Fulmar	5	Fly	No	100	B	Other	112	Adult	
Rigel Shipping	Dara Desgagnés/ Oil tanker	19-Sep-20		Common Eider	6	Fly	Yes	500	E	Other	180	Adult	Non-breeding
Transarctik	Nordika Desgagnés/ Cargo	21-Sep-20		Dovekie	10	Fly	Yes		C	Other		Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	21-Sep-20		Peregrine Falcon	1	Fly	Yes		A			Adult	Breeding
Desgagnés	Zelada/ Cargo	22-Sep-20		Unknown Falcon	1	Fly	No		A	Other	41		
Transarctik	Nordika Desgagnés/ Cargo	22-Sep-20		Glaucous Gull	2	Fly	No		C	Other	0	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	22-Sep-20		Glaucous Gull	6	Fly	No		D	Other	45	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	23-Sep-20		Northern Fulmar	2	Fly	No		C	Other	0	Adult	Breeding

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Desgagnés	Zelada/ Cargo	24-Sep-20		Unknown Gull	1	Fly	No		A	Other	260		
Desgagnés	Zelada/ Cargo	25-Sep-20		Unknown Gull	1	Fly	No		C	Other	310		
Transarctik	Nordika Desgagnés/ Cargo	26-Sep-20		Glaucous Gull	1	Fly	No		D	Other	178	Adult	Breeding
Desgagnés	Zelada/ Cargo	26-Sep-20		Unknown Gull	15	Fly	No		B	Other	110		
Desgagnés	Zelada/ Cargo	26-Sep-20		Unknown Gull	9	Fly	No		B	Other	110		
Transarctik	Nordika Desgagnés/ Cargo	28-Sep-20		Black-legged Kittiwake	1	Fly	No		C	Other	315	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	28-Sep-20		Northern Fulmar	2	Fly	No		C	Other	0	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	28-Sep-20		Black Guillemot	1	Fly	No		D	Other	315	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	29-Sep-20		Northern Fulmar	3	Fly	No		B	Other	0	Adult	Breeding
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Northern Fulmar	5	Fly	Yes		A	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Murre	15	Fly	Yes		A	Other	210	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Murre	2	Water	Yes		B	Rafting		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Murre	10	Fly	Yes		A	Other	30	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Murre	3	Water	Yes		B	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Murre	2	Water	Yes		B	Other		Young	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Northern Fulmar	4	Fly	Yes		A	Other	296	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Gull	1	Fly	Yes		A	Other	296	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Gull	10	Fly	Yes		A	Other			
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Great Skua	1	Fly	Yes		A	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Gull	2	Fly	Yes		B	Other		Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Dovekie	5	Fly	Yes		C	Other	75		
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	29-Sep-20		Unknown Gull	2	Fly	Yes		A	Other			
Transarctik	Nordika Desgagnés/ Cargo	01-Oct-20		Thick-billed Murre	1	Water	No		C	Rafting		Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	01-Oct-20		Northern Fulmar	3	Fly	No		B	Other	90	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	01-Oct-20		Unknown	2	Fly	No		D	Other	0	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	01-Oct-20		Peregrine Falcon	1	Fly	No		B	Other	315	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	02-Oct-20		Northern Fulmar	1	Water	No		A	Rafting		Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	02-Oct-20		Northern Fulmar	1	Fly	No		C	Other	0	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	03-Oct-20		Herring Gull	1	Fly	No			Other	270	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	03-Oct-20		Northern Fulmar	4	Fly	No			Other		Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	03-Oct-20		Northern Fulmar	1	Fly	No			Other	0	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	03-Oct-20		Pomarine Jaeger	2	Water	No			Other		Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	04-Oct-20		Northern Fulmar	2	Fly	No		C	Other	270	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	08-Oct-20		Northern Fulmar	2	Fly	No		C	Other	0	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	08-Oct-20		Glaucous Gull	1	Fly	No		C	Other	345	Adult	Breeding
Rigel Shipping	Maria Desgagnés/ Tanker	09-Oct-20		Herring Gull	3	Fly	Yes	100	B	Other		Adult	Non-breeding

Company/Agency	Platform Name and Type	Survey Date	Time of Observation	Species	Count	Observation Type	In Transect?	Distance (m)	Distance Category	Behaviour	Flight Direction (°)	Age	Plumage
Transarctik	Nordika Desgagnés/ Cargo	10-Oct-20		Glaucous Gull	1	Fly	No		D	Other	270	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	10-Oct-20		Pomarine Jaeger	2	Water	No		C	Other		Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	11-Oct-20		Black-legged Kittiwake	1	Fly	Yes		A	Other	90	Adult	Breeding
Rigel Shipping	Maria Desgagnés/ Tanker	11-Oct-20		Herring Gull	10	Fly	Yes	100	B	Other	205	Adult	Non-breeding
Transarctik	Nordika Desgagnés/ Cargo	12-Oct-20		Black-legged Kittiwake	1	Fly	Yes		A	Other	90	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	12-Oct-20		Glaucous Gull	2	Fly	No		B	Other	135	Adult	Breeding
Transarctik	Nordika Desgagnés/ Cargo	12-Oct-20		Pomarine Jaeger	1	Fly	Yes		A	Other		Adult	Breeding
Rigel Shipping	Maria Desgagnés/ Tanker	14-Oct-20		Herring Gull	2	Fly	Yes	50	A	Other		Adult	Non-breeding
Rigel Shipping	Maria Desgagnés/ Tanker	14-Oct-20		Glaucous Gull	1	Fly	Yes	10	A	Other		Adult	Non-breeding
Rigel Shipping	Maria Desgagnés/ Tanker	15-Oct-20		Herring Gull	3	Fly	Yes	30	A	Other		Adult	Non-breeding
Rigel Shipping	Maria Desgagnés/ Tanker	15-Oct-20		Common Eider	4	Water	Yes	10	A	Swimming		Adult	Non-breeding
	Maria Desgagnés/	16-Oct-20		White-winged Scoter	2	Water		10	A	Resting			
	Maria Desgagnés/	17-Oct-20		Common Eider	4	Water		10	A	Other			
	Maria Desgagnés/	18-Oct-20		Glaucous Gull	5	Fly		30	A	Other			
Rigel Shipping	Maria Desgagnés/ Tanker	20-Oct-20		Herring Gull	4	Fly	Yes	100	B	Other	100	Adult	Non-breeding
Desgagnés	Taiga Desgagnés/ Cargo	22-Oct-20		American Crow	1	Fly			A	Other	315		
Rigel Shipping	Maria Desgagnés/ Tanker	22-Oct-20		Herring Gull	10	Fly	Yes	100	B	Other	111	Adult	
Rigel Shipping	Maria Desgagnés/ Tanker	22-Oct-20		Glaucous Gull	10	Fly	Yes	100	B	Other	111	Adult	
Rigel Shipping	Maria Desgagnés/ Tanker	23-Oct-20		Common Murre	1	Fly	Yes	50	A	Escape Flight	80	Adult	Non-breeding
Rigel Shipping	Maria Desgagnés/ Tanker	23-Oct-20		Unknown Gull	20	Fly	Yes	100	B	Other	130	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Oct-20		Unknown Gull	1	Fly	Yes		C	Other	180	Adult	
Desgagnés/ Transarctik	Sedna Desgagnés/ Cargo	25-Oct-20		Unknown Gull	2	Water	Yes		C	Rafting			
Desgagnés	Taiga Desgagnés/ Cargo	27-Oct-20		Northern Fulmar	23	Fly			E	Other	180		
Desgagnés	Taiga Desgagnés/ Cargo	27-Oct-20		Snowy Owl	1	Fly			E	Other			
Desgagnés	Taiga Desgagnés/ Cargo	27-Oct-20		Peregrine Falcon	1	Fly			E	Other			



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## 58

24

Groupe Desguignes

Claude A. Desgagné

Alexandre Vézina

04/08/2020

$$\theta_{500} = 2.1 \times 10^{-2}$$
$$\frac{0.860 \text{ g}}{1.300 \text{ g}}$$

60°46,7'N	60°29,2'N
-----------	-----------

065° 57.8' W	064° 23.6' W
--------------	--------------

underway

more than 20

1

1

4

2m

20-25 kts

mostly west (2

0

0	
1234	

15.3 KTS

116°

Starboard	Port
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20m

Out	or	In

Yes or No

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Notes: No observations.

1

m b

## Record sheet for a moving platform survey

**Scan Information:**

Company/agency

Platform name and type

Observer(s)

Date (DD/MM/YYYY)

Time at start (UTC)

Latitude

Longitude

### Platform activity

Scan type

Scan direction

Visibility (km)

GROUPE Desgagnés  
Claude A. Desgagnés  
Alexandre Vézina  
03/08/2020  
Start Stop  
1100Z / 1300Z  
62°40,3' N  
078°19,4' W  
underway using engine  
(180°) or other (specify) \_\_\_\_\_  
NE  
more than 20km

Weather code

Glare conditions code

Sen state code

Wave height (m)

True wind speed (knots) OR

Beaufort code

True wind direction (deg)

Ice type code

Ice concentration code

Height of eye (m)

Outdoors or Indoors

1  
0  
1  
around 1m.  
18,9 Kts  
260°  
No ice 0  
N/A 0  
20m  
Out or In

Notes: Certain doubt on the specie due to the distance. First observation taken at 11602.

**Bird Information:** \*this field must be completed for each record

[illegible]

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, F = within 300m but no distance recorded.

<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

## Record sheet for a stationary platform survey

**Scan Information:**

Company/agency

Platform name and type

Observer (5)

(Date (DD/MM/YYYY))

Time at start (UTC)

Latitude

Longitude

### Platform activity

Scan type

Scan direction

Visibility (km)

Groupe Desgagne's  
Claude A. Desgagne's  
Alexandre Vecina  
02/08/2020  
1200Z to 1400Z  
62°45,2'N  
092°02,4'W  
Underway using engine  
180° or other (specify: )  
East  
more than 20nm

Weather code

Glycine conditions code

Sea state code

Wave height (m)

True wind speed (knots) OR

Beaufort code

True wind direction (deg)

Ice type code

Ice concentration code

Height of eye (m)

Outdoors or Indoors

0  
0  
1  
less 1m  
5kts  
000°  
~~0~~  
~~0~~  
20m  
Out or In

**Notes:**

**Bird Information:** \*this field must be completed for each record

[illegible]

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, Z = within 300m but no distance recorded.

<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>1</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>2</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

**Scan Information:**

Claude Desgagnés  
 Claude H. Desgagnés  
 Alexandrie Vézina  
 3/107/2020  
 22002 / 24002  
 63°56.4'N  
 93°38.3'W  
 AT Gacher  
 180° or other (specify: )  
 North-west  
 more than 20

Weather code  
Glare conditions code  
Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
Height of eye (m)  
(Outdoors or Indoors

1  
1  
2  
between 1-1.5m  
20kts  
North (000°)  
O  
O  
20m  
Out or In

Notes: No observations.

[illegible]

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)



**Scan Information:**

Groupe Dessagnés  
 Claude A. Dessagnés  
 Alexandre Verine  
 30/07/2020  
 2200 / 2400 z  
 63°56'5"N  
 093°38'3"W  
 AI anchor  
 180° or other (specify: )  
 North  
 max than 20m/s

Weather code  
Glare conditions code  
Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
Height of eye (m)  
(Outdoors or Indoors

less than 1m  
20kts  
000°  
20M  
Out or In

Notes: No observations.

[illegible]

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, Z = within 300m but no distance recorded.

<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)



<sup>2</sup> *J*(juvenile), *I*(immature), or *A*(adult); <sup>3</sup> *B*(breeding), *NB*(non-breeding), *M*(molt)

• • •

less than 1m  
13kfs  
180°  
20m  
Out or In

Notes: No observations

[illegible]

<sup>3</sup>J (juvenile), I (immature), or A (adult); <sup>4</sup>B (breeding), NB (non-breeding), M (molt)

• • •

Company/agency  
Platform name and type  
Observer(s)  
Date (DD/MMM/YYYY)  
Time at start (UTC)  
  
Latitude  
Longitude  
  
Platform activity  
Scan type  
Scan direction  
Visibility (km)

Groupe Desgagnés  
 Claude A. Desgagnés  
 Alexandre Večina  
 26/07/2020  
 2000z - 2200z  
 63°56'SN  
 093°38.3W  
 AT anchor  
 180° or other (specify: )  
 North-East  
 more than 20 miles

Weather code  
Glare conditions code  
Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
Height of eye (m)  
(Outdoors or Indoors)

1  
1  
2  
less 1m  
20 kts  
090°  
8  
8  
20M  
Out or In

Notes: No observations

**Bird Information:** \*this field must be completed for each record

[illegible]

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, J = within 300m but no distance recorded.

<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)



9.  $\frac{1}{2}$

Company/agency  
Platform name and type  
Observer(s)  
Date (DD/MMM/YYYY)  
Time at start (UTC)  
  
Latitude  
Longitude  
  
Platform activity  
Scan type  
Scan direction  
Visibility (km)

Groupe Desgagnés  
 Clavile A. Desgagnés  
 Alexandre Vézina  
 25/07/2020  
 2200 z / 2400 z  
 63° 56' 2" N  
 093° 38' 4" W  
 AT anchor  
 180° or other (specify: )  
 North  
 more than 20 miles

Weather code  
Glare conditions code  
Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
Height of eye (m)  
Outdoors or indoors

0  
0  
1  
1m and less  
17Kts  
160"  
0  
0  
20m  
Out or In

**Notes:**

**Bird Information:** \*this field must be completed for each record

[illegible]

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, Z = within 300m but no distance recorded.

<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

10

0  
0  
2  
1-2m  
18 kts  
165°  
0  
0  
20 m  
Out or In

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

100

Company/agency  
Platform name and type  
Observer(s)  
Date (DD/MMM/YYYY)  
Time at start (UTC)  
  
Latitude  
Longitude  
  
Platform activity  
Scan type  
Scan direction  
Visibility (km)

Groupe Desgagnés  
 Claude A. Desgagnés  
 Alexandre Vézina  
 23/07/2020  
 2200 z / 2400 z  
 63° 56.5' N  
 093° 38.3' W  
 AS anchor  
 180° or other (specify: )  
 North  
 more than 20'

Weather code  
Glare conditions code  
Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
Height of eye (m)  
Outdoors or Indoors

less than 5k/s  
VAR 000° - 030°  
20m  
Out or In

**Notes:**

No observations

**Bird Information:** \*this field must be completed for each record

[illegible]<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)







**Observation Period Information:**

Glare conditions code

Snapshot used?

Notes: GLGV Floating alone near seaweed patch

[illegible]<sup>1</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>2</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

10

Company/agency
Platform name and type
Observer(s)
Date (DD/MM/YYYY)
Time at start (UTC)
Time at end (UTC)
Latitude at start / end
Longitude at start / end
Platform activity
Visibility (km)
Weather code
Glare conditions code

Groupe Desgagnés  
Claude A. Desgagnés  
Alexandre Verina

18/07/2020

12 24  
14 24

62°39,3'N	62°36,0'N
079°13,9'W	080°15,5'W

Underway using engine

2 Km

3  
1

Sea state code  
Wave height (m)  
True wind speed (knots) **OR**  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
True platform speed (knots)  
True platform direction (deg)  
Observation side  
Height of eye (m)  
Outdoors or Indoors  
Snapshot used?

1  
 < 1 m  
 1,9 Kts  
 45°  
 Ø  
 Ø  
 14,3 Kts  
 265°  
 Starboard (Port)  
 20 m  
 (Out) or In  
 Yes or (No)

Notes: BLGU not 100% sure of the specie.  
POJA not sure on the exact number, flying in group.

[illegible]

<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>1</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>2</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

1000

Groupe Desgagnés  
Claude A. Desgagnés  
Daniel  
Mingorance - Geraldo

Clarke A. Desgagnés

Daniel  
Mingorance - Estrada

17-07-2020

1300

1500

61°54'43"N	62°02.86'N
------------	------------

070° 47 574 071° 24 264

Under way with Engine

5 km

2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1	
---	--

Under 3ft (1m)

3

0000T

Ice Bags

1250

13.7 km
---------

3100T

Starboard	Port
-----------	------

20
----

(Out) or In

Yes or ~~No~~

YES	OK	NO
-----	----	----

Notes:

**Bird Information:** \*this field must be completed for each record

[illegible]

A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, J = within 300m but no distance recorded.

<sup>a</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>1</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>2</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

100

100

Groupe Desgagné's

Claude A. Desgagnés  
Alexandre Vézina (3/01)

16/07/2020

2350

0250	17/07
Coil & 1' N	Coil 2d 5' N

060°10,1'N	060°29,5'N
063°35,6'W	064°23,9'W

Underway using engine  
18 knots

17 KM
1

0

on near water I

on board).

7
---

 $\angle Im$ 

7 Kts
170°

icebergs

0
144 Kts

300°

Starboard	Port
2000	

20M  
Out or In

Yes or No

per on the

---

100

[illegible]<sup>2</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction[illegible]



## MARINE MAMMAL PROGRAM

Fill out one sheet per observation period

Observation Period Information:

Company/agency	Groupe Desgagnés		Sea state code *	
Platform name and type	Claude A. Desgagnés		Wave height (m)	less than 1m
Observer(s)	Alexandre Vézina		True wind speed (knots) OR Beaufort code	5 Kts
Date (DD/MM/YYYY)	02/08/2020		True wind direction	
Time at start (UTC)	1200 Z		Ice type code *	N/A
Time at end (UTC)	1400 Z		Ice concentration code *	N/A
Latitude at start / end	62°45.2'N	62°34.8'N	True platform speed (knots)	5.2 Kts
Longitude at start / end	092°02.4'W 090°41.0'W		True platform direction	
Visibility (km)	more than 20km		Observation side	Starboard <input checked="" type="radio"/> Port <input type="radio"/> Middle
Weather code *	Blue sky (1)		Height of eye (m)	20m
Glare conditions code *	0		Outdoors or indoors	Out <input checked="" type="radio"/> or <input type="radio"/> Indoors
Platform Activity	Underway		Notes	2 seals of UNKN Specy

\* Refer to "Codes" datasheets

## AGNICO EAGLE

➤ Fill out one sheet per observation period, if no observation, write "No observation"

[illegible]

\* Refer to "Codes" datasheets

# MARINE MAMMAL PROGRAM

AGNICO EAGLE

➔ Fill out one sheet per observation period

## Observation Period Information:

Company/agency	Groupe Desgagnés		Sea state code *	1
Platform name and type	Claude A. Desgagnés		Wave height (m)	50 cm
Observer(s)	Daniel Mirgorane		True wind speed (knots) OR Beaufort code	5
Date (DD/MMM/YYYY)	19-07-2020		True wind direction	N
Time at start (UTC)	1400		Ice type code *	Ø
Time at end (UTC)	1600		Ice concentration code *	0
Latitude at start / end	62° 41.49' N	63° 04.39' N	True platform speed (knots)	13.6 kn
Longitude at start / end	090° 47.74' W	090° 20.01' W	True platform direction	0350
Visibility (km)	10 km		Observation side	Starboard Port <input checked="" type="radio"/> Middle
Weather code *	1		Height of eye (m)	20 m
Glare conditions code *	0		Outdoors or Indoors	<input checked="" type="radio"/> Out or In
Platform Activity	Underway Using Engine		Notes	Observed 2 mother & 2 cub polar bears in water

\* Refer to "Codes" datasheets

## MARINE MAMMAL PROGRAM

**AGNICO EAGLE**

➤ Fill out one sheet per observation period, if no observation, write "No observation"

[illegible]

- Refer to "Codes" datasheets

# MARINE MAMMAL PROGRAM

AGNICO EAGLE

➔ Fill out one sheet per observation period

Observation Period Information:				
Company/agency	Groupe Desgagnés		Sea state code ★	1
Platform name and type	Claude A. Desgagnés		Wave height (m)	Under 3ft (1m)
Observer (s)	Daniel Mingorance-Geraldo		True wind speed (knots) OR ★ Beaufort code	3
Date (DD/MMM/YYYY)	17/07/2020		True wind direction	East 090°
Time at start (UTC)	1300		Ice type code ★	Ice Bergs
Time at end (UTC)	1500		Ice concentration code ★	0
Latitude at start / end	61° 54' 43" N		True platform speed (knots)	13.7 kn
Longitude at start / end	070° 42.87' W		True platform direction	310°
Visibility (km)	5 km		Observation side	Starboard Port <u>Middle</u>
Weather code ★	2		Height of eye (m)	20m
Glare conditions code ★	1		Outdoors or Indoors	<u>Out</u> or In
Platform Activity	Sailing to destination		Notes	No Sightings

★ Refer to "Codes" datasheets



# MARINE MAMMAL PROGRAM

AGNICO EAGLE

➔ Fill out one sheet per observation period

Observation Period Information:				
Company/agency	Groupe Desgagnés		Sea state code *	1
Platform name and type	CLAUDE A. DESGAGNÉS		Wave height (m)	< 1m
Observer (s)	Alexandre Vezina		True wind speed (knots) OR * Beaufort code	1.9 kn
Date (DD/MM/YYYY)	18/07/2020		True wind direction	45°
Time at start (UTC)	1724		Ice type code *	0
Time at end (UTC)	1424		Ice concentration code *	0
Latitude at start / end	62° 39.3' N	62° 36.0' N	True platform speed (knots)	14.3 kts
Longitude at start / end	079° 13.9' W	080° 15.6' W	True platform direction	265°
Visibility (km)	7 km		Observation side	Starboard <input checked="" type="radio"/> or Middle <input type="radio"/>
Weather code *	3		Height of eye (m)	20m
Glare conditions code *	1		Outdoors or Indoors	Out <input checked="" type="radio"/> or In <input type="radio"/>
Platform Activity	Underway Using Engine		Notes	No mammals observed

\* Refer to "Codes" datasheets

**AGNICO EAGLE**

➤ Fill out one sheet per observation period, if no observation, write "No observation"

\* Refer to "Codes" datasheets

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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	03/09/2020		Observer Name	Alexandre V.					
			Height of Eye (m)	20m					
Vessel Information									
Company/Agency	Groupe Desgagnés		Vessel Type	General cargo					
Vessel Name	Claude A. Desgagnés		Vessel Activity	Moving Stationary					
			Vessel Speed (kt)	15.6					
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	090°		Glare Conditions	<u>None Bright</u>	Slight Grey				
			Sea State (0-9)	2/3					
			Wave Height (m)	> 1m					
			Visibility (km)	> 20km					
Survey Information									
Transect Start	Local Time (24 hr)	0800 ST(+4)	Latitude (DD)	62°31.9'N					
Transect End	Local Time (24 hr)	1000 ST(+4)	Latitude (DD)	62°27.3'N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	Port				
				<u>Bow</u>					
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
NOFU	3	Fly	Y	≈ 100		000°	A	Ø	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	02/09/2020		Observer Name	Alexandre V					
				Height of Eye (m)	20m				
Vessel Information									
Company/Agency	Groupe Desgagnés		Vessel Type	General cargo					
Vessel Name	Claude A. Desgagnés		Vessel Activity	<u>Moving</u>	Stationary				
				Vessel Speed (kt)	14.8				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	330°		Glare Conditions	None	<u>Slight Grey</u>				
				Bright					
Sea State (0-9)			4/5						
Wave Height (m)			> 2m						
Visibility (km)			> 20km						
Survey Information									
Transect Start	Local Time (24 hr)	0800	ST(+4)	Latitude (DD)	62° 24' 5" N				
Transect End	Local Time (24 hr)	1000	ST(+4)	Latitude (DD)	62° 12' 9" N				
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	Port				
					<u>Bow</u>				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
NOFU	3	Fly	Y	> 100m		≈ 180°	A		

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	01/09/2020		Observer Name	Alexandre V					
				Height of Eye (m)	20m				
Vessel Information									
Company/Agency	Groupe Desgagnés		Vessel Type	Cargo general					
Vessel Name	Claude A. Desgagnés		Vessel Activity	Moving	<u>Stationary</u>				
				Vessel Speed (kt)	0 kts				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	<u>Rain</u> Snow				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	<u>Gale Force Wind</u>	Stormy				
Wind Direction (Deg)	120°		Glare Conditions	None Bright	<u>Slight Grey</u>				
				Sea State (0-9)	3				
				Wave Height (m)	>1m				
				Visibility (km)	>20km				
Survey Information									
Transect Start	Local Time (24 hr)	0600	ST (+4)	Latitude (DD)	63°56'S N				
Transect End	Local Time (24 hr)	0800	ST (+4)	Latitude (DD)					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	Port				
				<u>Bow</u>					
Notes: No observations.									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	31/08/2020		Observer Name	Alexandre V.					
				Height of Eye (m)	20m				
Vessel Information									
Company/Agency	Group Desgagnés		Vessel Type	General Cargo					
Vessel Name	Claude A. Desgagnés		Vessel Activity	Moving	Stationary				
				Vessel Speed (kt)	0,0 Kts				
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain Snow				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	+ Gale Force Wind	Stormy				
Wind Direction (Deg)	120°		Glare Conditions	None Bright	Slight Grey				
				Sea State (0-9)	2				
				Wave Height (m)	approx 1m				
				Visibility (km)					
Survey Information									
Transect Start	Local Time (24 hr)	0600 ST(+4)	Latitude (DD)	63°56,5'N					
Transect End	Local Time (24 hr)	0800 ST(+4)	Latitude (DD)						
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
				Bow					
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Peregrine falcon	1	Fly	N	VAR	Flight	VAR	♂	♂	circling around vessel

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	30/08/2020		Observer Name	Alexandre V.					
				Height of Eye (m)	20m				
Vessel Information									
Company/Agency	Groupe Desgagnés		Vessel Type	General cargo					
Vessel Name	Claude A. Desgagnés		Vessel Activity	Moving	Stationary				
				Vessel Heading	VAR				
				Vessel Speed (kt)	0kts				
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	090°		Glare Conditions	None	Slight Grey				
				Sea State (0-9)	1				
				Wave Height (m)	0.5m				
				Visibility (km)	> 20km				
Survey Information									
Transect Start	Local Time (24 hr)	0600 ST (+4)	Latitude (DD)	63°36'S N					
Transect End	Local Time (24 hr)	0800 ST (+4)	Latitude (DD)						
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
				Bow					
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
NOFW	4	Fly	N	>100	other	270°	✓	✓	looks like a sandpiper (unsure)
UNKW	2	Fly	N	100m	around vessel	VAR	✓	✓	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	29/08/2020		Observer Name	Alexandre Verone					
				Height of Eye (m)	20m				
Vessel Information									
Company/Agency	Groupe Desgagnés		Vessel Type	General cargo					
Vessel Name	Claude A. Desgagnés		Vessel Activity	Moving	Stationary				
				Vessel Speed (kt)	0,0 Kts				
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain Snow				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	270°		Glare Conditions	None Bright	Slight Grey				
					Sea State (0-9)				
					1/2				
					Wave Height (m)				
					< 1m				
					Visibility (km)				
					VAR ± 5'				
Survey Information									
Transect Start	Local Time (24 hr)	0600 LT (+4)	Latitude (DD)	63°56,5'N					
Transect End	Local Time (24 hr)	0800 LT (+4)	Latitude (DD)						
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
					Bow				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
NOFU	1	Fly	N	100m	Flying	000°	Adult	UNKW	
NOFU	3	Fly	N	>200m	Flying	000°	Adult	Ø	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	28/08/2020		Observer Name	Alexandre V.					
				Height of Eye (m)	20m				
Vessel Information									
Company/Agency	Groupe Desgagnés		Vessel Type	General cargo					
Vessel Name	Claude A. Desgagnés		Vessel Activity	Moving	Stationary				
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	VAR 180°-220°		Glare Conditions	None Bright	Slight Grey				
				Sea State (0-9)	1				
				Wave Height (m)	2.1m				
				Visibility (km)	220km				
Survey Information									
Transect Start	Local Time (24 hr)	0600 LT (+4)	Latitude (DD)	056°S	Longitude (DD)				
Transect End	Local Time (24 hr)	0800 LT (+4)	Latitude (DD)		Longitude (DD)				
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
				Bow					
Notes: NO OBSERVATIONS TO Report For that period of time									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".





<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult): <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult): <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)



# Record sheet for a stationary platform survey

## Scan Information:

Company/agency  
Platform name and type  
Observer(s)  
Date (DD/MM/YYYY)  
Time at start (UTC)  
Latitude  
Longitude  
Platform activity  
Scan type  
Scan direction  
Visibility (km)

Groupe Desgagnés  
Claude A. Desgagnés  
Alexandre Verre  
23/08/2020  
12002 / 14002  
63°18.6'N  
090°37.3'W  
At anchor  
180° or other (specify: )  
South  
More than 20km

Weather code  
Glare conditions code  
Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
Height of eye (m)  
Outdoors or Indoors

0  
0  
0  
less than 1m  
9Kts  
300°  
0  
0  
20m  
Out or In

Notes:

## Bird Information: \*this field must be completed for each record

Species	Count	Fly or Water?	In semi-circle?	Distance <sup>1</sup>	Assoc.	Behav.	Flight Direc. <sup>2</sup>	Age <sup>3</sup>	Plum. <sup>4</sup>	Sex	LSA or RSA	Comments
NOFU	2	Fly	NO	B	-	-	North	-	-	-	-	Passing in front of us
Petrel	1	✗	✗	A	-	-	-	-	-	-	-	on vessel

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, J = within 300m but no distance recorded.

<sup>2</sup> Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup> J (juvenile), I (immature), or A (adult); <sup>4</sup> B (breeding), NB (non-breeding), M (molt)





• • • • •

Date (DD/MM/YY)  
Time at start (UTC)  
Time at end (UTC)  
Latitude at start / end  
Longitude at start / end  
Platform activity  
Visibility (km)  
Weather code  
Glare conditions code

Group Desgays  
Claude A. Desgays  
Alexandre Vézina  
21/08/2020  
12002  
14002  
62°46,4'N 62°54,6'N  
087°50,4'W 088°32,5'W  
Underway  
More than 20 Km  
1  
1

Sea state code  
Wave height (m)  
True wind speed (knots) OR  
Beaufort code  
True wind direction (deg)  
Ice type code  
Ice concentration code  
True platform speed (knots)  
True platform direction (deg)  
Observation side  
Height of eye (m)  
Outdoors or Indoors  
Snapshot used?

2  
around 2m  
10-15 kts  
180°  
0  
0  
11.3 Rts  
293°  
Starboard Port (CNTR)  
20m  
(Out or In)  
Yes or No

**Notes:**

NO OBSERVATIONS

**Bird Information:** \*this field must be completed for each record

[illegible]

A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, J = within 300m but no distance recorded.

<sup>b</sup>Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction<sup>1</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

# Record sheet for a moving platform survey

## Observation Period Information:

Company/agency	Groupe Desgagnés	Sea state code	2
Platform name and type	Claude A. Desgagnés	Wave height (m)	1m
Observer (s)	Alexandre Vezeau	True wind speed (knots) OR	17 Kts
Date (DD/MM/YYYY)	20/24/08	Beaufort code	000
Time at start (UTC)	1200Z	True wind direction (deg)	0
Time at end (UTC)	1400Z	Ice type code	0
Latitude at start / end	62°43.3'N 62°40.7'N	Ice concentration code	11, 1 Kts
Longitude at start / end	078°04.4'W 078°49.4'W	True platform speed (knots)	2.63
Platform activity	Underway	True platform direction (deg)	Starboard Port (WTR)
Visibility (km)	more than 20km	Observation side	20m
Weather code	0	Height of eye (m)	Out or In
Glare conditions code	0	Outdoors or Indoors	Yes or No
		Snapshot used?	

Notes:

## Bird Information: \*this field must be completed for each record

Species	Count	Fly or Water?	In transect?	Distance <sup>1</sup>	Assoc.	Behav.	Flight Direc. <sup>2</sup>	Age <sup>3</sup>	Plum. <sup>4</sup>	Sex	ISA or RSA	Comments
JNKW	15	FLY	NO	E	-	-	S	-	-	-	-	in formation
NOFU	3	FLY	NO	E	-	-	SE	-	-	-	-	
NOFU	±5	FLY	NO	B	-	-	S	-	-	-	-	
POSA	3	FLY	NO	B	18	FI	S					
POSA	10+	FLY	NO	B	18	FI	SE					
POSA	2	FLY	NO	B	18	FI	S					
POSA	1	FLY	NO	B	18	FI	S					
SAGU	2	WTR	NO	A	18	FI						
NOFU	1	FLY	NO	B	18	FI	S					
POSA	2	FLY	NO	B	18	FI	NE					

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, 3 = within 300m but no distance recorded.

<sup>2</sup> Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup> J (juvenile), I (immature), or A (adult); <sup>4</sup> B (breeding), NB (non-breeding), M (molt)

# Record sheet for a moving platform survey

## Observation Period Information:

Company/agency

Platform name and type

Observer (s)

Date (DD/MM/YYYY)

Time at start (UTC)

Time at end (UTC)

Latitude at start / end

Longitude at start / end

Platform activity

Visibility (km)

Weather code

Glare conditions code

Groupe Desgagnés	
Claude A. Desgagnés	
Alexandre Vecina	
14/08/2020	
1200Z	
1400Z	
61°22,8'N	61°32,4'N
069°10,9'W	069°55,4'W
Underway	
6 KM	
2	
3	

Sea state code

Wave height (m)

True wind speed (knots) OR

Beaufort code

True wind direction (deg)

Ice type code

Ice concentration code

True platform speed (knots)

True platform direction (deg)

Observation side

Height of eye (m)

Outdoors or Indoors

Snapshot used?

4
between 1-2m
10.7 Kts
090°
—
—
12.4 Kts
284 - 301
Starboard Port Center
20m
Out or In
Yes or No

Notes:

## Bird Information: \*this field must be completed for each record

Species	Count	Fly or Water?	In transect?	Distance <sup>1</sup>	Assoc.	Behav.	Flight Direc. <sup>2</sup>	Age <sup>3</sup>	Plum. <sup>4</sup>	Sex	ISA or RSA	Comments
NOFU	3	FLY	NO	D	18	FI	N-E	—	—	—	—	Not a group
NOFU	1	FLY	NO	E	18	FI	SW	—	—	—	—	
NOFU	2	FLY	NO	E	18	FI	N	—	—	—	—	
NOFU	5	FLY	NO	E	18	FI	N	—	—	—	—	

<sup>1</sup> A = 0-50m, B = 51-100m, C = 101-200m, D = 201-300m, E = > 300m, J = within 300m but no distance recorded.

<sup>2</sup> Indicate flight direction (N, NE, E, SE, S, SW, W, or NW); ND = no apparent direction

<sup>3</sup> J (juvenile), I (immature), or A (adult); <sup>4</sup> B (breeding), NB (non-breeding), M (molt)

**Observation Period Information:**

Glare conditions code

Groupe Desgagnés  
Claude A. Desgagnés  
Alexandre Vézing  
18/08/2020  
2000  
22002  
60°05.9'N 60°24.7'N  
062°57.7'W 063°34.4'W  
Underway  
more than 20km  
1  
0

Snapshot used?

more than 2m  
25 Kts  
150  
N/A (0)  
N/A (0)  
12.5 Kts  
317  
Starboard Port ENTQ  
20m  
Out or In  
Yes or No

Notes: No observations

[illegible]<sup>3</sup>*J*(juvenile), *I*(immature), or *A*(adult); <sup>4</sup>*B*(breeding), *NB*(non-breeding), *M*(molt)

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

Survey Type (circle one):		<i>Moving Vessel</i>		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	08/08-2020		Observer Name	Shane Harvey					
Company/Agency		Rygel Shipping		Vessel Type	Tanker oil				
Vessel Name	Dara Desgaines		Vessel Activity	Moving	Stationary				
Vessel Speed (kt)		10 kts							
Environmental Information									
Weather	<input checked="" type="radio"/> Clear <input type="radio"/> Partly Cloudy <input type="radio"/> 100% Cloud <input type="radio"/> Fog <input type="radio"/> Rain <input type="radio"/> Snow				Sea State (0-9)	0			
Beaufort Wind Force	<input checked="" type="radio"/> Calm <input type="radio"/> Light Wind <input type="radio"/> Strong Wind <input type="radio"/> Gale Force Wind <input type="radio"/> Stormy				Wave Height (m)	N.I			
Wind Direction (Deg)	Lt Airs		Glare Conditions	<input checked="" type="radio"/> None <input type="radio"/> Slight Grey <input type="radio"/> Bright		Visibility (km)	28 km		
Survey Information									
Transect Start	Local Time (24 hr)		Latitude (DD)	64°03'N					
Transect End	Local Time (24 hr)		Latitude (DD)						
Observer Location	Outdoors	<input checked="" type="radio"/> Indoors	Observation Side	<input checked="" type="radio"/> Starboard	Port	Bow			
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	20	Fly/Water	N	500m	Feeding	-	Adult	Non-Breed	Common Seagull
Red Breasted Merganser	2	Fly	N	600m	Flight	NE	Adult	Non-Breed	Duck in Flight

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		<u>Moving Vessel</u>		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	<u>08/08-2020</u>		Observer Name	<u>Shane Hickey</u>					
			Height of Eye (m)	<u>22m</u>					
Company/Agency	<u>Rygel Shipping</u>		Vessel Type	<u>Tanker oil</u>					
Vessel Name	<u>Dara Desgaries</u>		Vessel Activity	<u>Moving</u> <u>Stationary</u>					
Environmental Information									
Weather	<u>Clear</u> <u>Partly Cloudy</u> <u>100% Cloud</u> <u>Fog</u> <u>Rain</u> <u>Snow</u>				Sea State (0-9)				
Beaufort Wind Force	<u>Calm</u> <u>Light Wind</u> <u>Strong Wind</u> <u>Gale Force Wind</u> <u>Stormy</u>				Wave Height (m)				
Wind Direction (Deg)	<u>4 A.K.S</u>		Glare Conditions	<u>None</u> <u>Bright</u> <u>Slight Grey</u>					
Transect Information									
Transect Start	Local Time (24 hr)		Latitude (DD)	<u>64°03'N</u>					
Transect End	Local Time (24 hr)		Latitude (DD)						
Observer Location	<u>Outdoors</u> <u>Indoors</u>	Observation Side	<u>Starboard</u> <u>Port</u> <u>Bow</u>						
Notes:									
Seabird Sightings									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
<u>Herring Gull</u>	<u>20</u>	<u>Fly/Water</u>	<u>N</u>	<u>500m</u>	<u>Feeding</u>	<u>-</u>	<u>Adult</u>	<u>Non-Breed</u>	<u>Common Seagull</u>
<u>Red Breasted Merganser</u>	<u>2</u>	<u>Fly</u>	<u>N</u>	<u>600m</u>	<u>Flight</u>	<u>NE</u>	<u>Adult</u>	<u>Non-Breed</u>	<u>Duck in Flight</u>
<u>Seagull</u>	<u>5</u>	<u>Fly/Water</u>	<u>N</u>	<u>500m</u>	<u>Flying</u>	<u>NE</u>	<u>Adult</u>	<u>Non-Breeding</u>	<u>Seagull</u>

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
Date (DD/MMM/YYYY)	09/08/2020		Observer Name	YURIY NIGOVAN					
Company/Agency	RIGEL Shipping		Vessel Type	TANKER OIL					
Vessel Name	DARA DESGASNER		Vessel Activity	Moving <u>Stationary</u>					
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	ESE		Glare Conditions	None <u>Bright</u> Slight Grey					
Sea State (0-9)	2		Wave Height (m)	< 1					
Visibility (km)	27								
Transect Start	Local Time (24 hr)		Latitude (DD)	64° 18.12 N					
Transect End	Local Time (24 hr)		Latitude (DD)						
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	<u>Port</u>				
Notes:									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
HERRING GULL	5+1	WATER	N	300M	RAFTING	—	Adult	Non-Breed	Common Seagull
HERRING GULL	1+1	WATER	N	600M	RAFTING	—	Adult	Non-Breed	Common Seagull

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	19/09/2020		Observer Name	RISHAB N SHARMA					
Height of Eye (m)		19							
Vessel Information									
Company/Agency	RIGEL SHIPPING		Vessel Type	OIL TANKER					
Vessel Name	DARA DESGARNES		Vessel Activity	<u>Moving</u> Stationary					
Vessel Speed (kt)		12.6							
Environmental Information									
Weather	Clear Partly Cloudy <u>100% Cloud</u> Fog Rain Snow		Sea State (0-9)						
Beaufort Wind Force	Calm Light Wind <u>Strong Wind</u> Gale Force Wind Stormy		Wave Height (m)						
Wind Direction (Deg)	Glare Conditions		None Slight Grey Bright		Visibility (km)				
Survey Information									
Transect Start	Local Time (24 hr)	06:00	Latitude (DD)	61°27.9 N					
Transect End	Local Time (24 hr)	06:30	Latitude (DD)	061 30.4 N					
Observer Location	Outdoors <u>Indoors</u>		Observation Side	Starboard	Port				
Bow									
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
COMMON EIDER	6	FLY	Y	500m	FLIGHT	180	ADULTS	NON-BREEDING	<del>NEAR</del> SEA SURFACE

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	19/09/2020	Observer Name	RISHABH N SHARMA	Height of Eye (m)	19.0				
Vessel Information									
Company/Agency	RIGEL SHIPPING	Vessel Type	OIL TANKER	Vessel Heading	289°				
Vessel Name	DARA DELGAGNEL	Vessel Activity	<u>Moving</u> Stationary	Vessel Speed (kt)	12.6				
Environmental Information									
Weather	Clear Partly Cloudy <u>100% Cloud</u> Fog Rain Snow	Sea State (0-9)		2					
Beaufort Wind Force	Calm Light Wind <u>Strong Wind</u> Gale Force Wind Stormy	Wave Height (m)		<1.0 m					
Wind Direction (Deg)	WSW	Glare Conditions	<u>None</u> Slight Grey Bright	Visibility (km)					
Survey Information									
Transect Start	Local Time (24 hr)	06:00	Latitude (DD)	61°29.9'N	Longitude (DD)				
Transect End	Local Time (24 hr)	06:30	Latitude (DD)	61°30.4'N	Longitude (DD)				
Observer Location	Outdoors <u>Indoors</u>	Observation Side	Starboard	Port	Bow				
Notes: NO OBSERVATION									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MM/YYYY)	21.09.2020		Observer Name	RISHABH N SHARMA					
Height of Eye (m)		19.0 m							
Vessel Information									
Company/Agency	RIGEL SHIPPING		Vessel Type	OIL TANKER					
Vessel Name	DARA DEGGABNER		Vessel Activity	Moving	<u>Stationary</u>				
Vessel Speed (kt)		0.0 kt							
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Sea State (0-9)	3								
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wave Height (m)	1.0 m								
Wind Direction (Deg)	E		Glare Conditions	<u>None Bright</u>	Slight Grey				
Visibility (km)	710 km								
Survey Information									
Transect Start	Local Time (24 hr)	17:15	Latitude (DD)	63° 18.5' N					
Transect End	Local Time (24 hr)	17:45	Latitude (DD)	— 11 —					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	Port				
Bow									
Notes: NO OBSERVATION.									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	22/09/2020		Observer Name	RIKHAB N SHARMA					
		Height of Eye (m)		19.0 m					
Vessel Information									
Company/Agency	RIGEL SHIPPING		Vessel Type	OIL TANKER					
Vessel Name	DARA DERGAGNES		Vessel Activity	<u>Moving</u> Stationary					
		Vessel Speed (kt)		11.8					
Environmental Information									
Weather	Clear Partly Cloudy <u>100% Cloud</u> Fog Rain Snow		Sea State (0-9)		3				
Beaufort Wind Force	Calm Light Wind <u>Strong Wind</u> Gale Force Wind Stormy		Wave Height (m)		1.0 m				
Wind Direction (Deg)	NE		Glare Conditions	None Bright Slight Grey					
		Visibility (km)		7.0 km					
Survey Information									
Transect Start	Local Time (24 hr)	15:45	Latitude (DD)	63°37.8'N					
Transect End	Local Time (24 hr)	16:15	Latitude (DD)	63°41.2'N					
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
		Bow							
Notes: NO OBSERVATION									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

[illegible]

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



General Information							
Date (DD/MM/YYYY)	20.09.2020	Observer Name	RISHABH N SHARMA		Height of Eye (m)	19.0	
Vessel Information							
Company/Agency	RIGEL SHIPPING	Vessel Type	OIL TANKER		Vessel Heading (compass)	276°	
Vessel Name	DARA DESGAGNES	Vessel Activity	Moving		Vessel Speed (kt)	10.5	
Environmental Information							
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain	Snow	Sea State (0-6)
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy		Wave Height (m)
Wind Direction (deg.)	-		Glare Conditions	None	Slight Grey	Bright	Visibility (km)
Survey Information							
Transect Start	Local Time (24 hr)	06:00	Latitude (DD)	62°40.6'N		Longitude (DD)	077°04.5'W
Transect End	Local Time (24 hr)	07:30	Latitude (DD)	62°42.0'N		Longitude (DD)	077°31.2'W
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port	Bow	
Notes	NO OBSERVATION						

[illegible]



General Information							
Date (DD/MM/YYYY)	21/09/2020		Observer Name	RISHABH N SHARMA		Height of Eye (m)	19.0 m
Vessel Information							
Company/Agency	RIGEL SHIPPING		Vessel Type	OIL TANKER		Vessel Heading (compass)	293°
Vessel Name	DARA DERGAGNE		Vessel Activity	Moving		Vessel Speed (kt)	13.7
Environmental Information							
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain	Snow	Sea State (0-5)
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy		Wave Height (m)
Wind Direction (deg.)	NNE		Glare Conditions	None	Slight Gray	Bright	Visibility (km)
							>10 km
Survey Information							
Transect Start	Local Time (24 hr)	06:00	Latitude (DD)	62°32'N		Longitude (DD)	086°29.3'W
Transect End	Local Time (24 hr)	07:45	Latitude (DD)	62°41.6'N		Longitude (DD)	087°17.2'W
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port	Bow	
Notes	NO OBSERVATION						

[illegible]

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

General Information									
Date (DD/MM/YYYY)	22/09/2020		Observer Name	KIRNABH N. SARMA		Height (m) (5/10)	19.0 m		
Vessel Information									
Company/Agency	RIGEL SHIPPING		Vessel Type	OIL TANKER		Vessel Heading (Compass)	107°		
Vessel Name	DARA DELGAGNER		Vessel Activity	Moving <u>Stationary</u>		Vessel Speed (kt)	0.0 Kt		
Environmental Information									
Weather	Clear <u>Partly Cloudy</u> 100% Cloud Fog Rain Snow					Sea State (0-3)	4		
Beaufort Wind Force	Calm Light Wind <u>Strong Wind</u> Gale Force Wind Stormy					Wave Height (m)	>1.0 m		
Wind Direction (deg.)	ENE		Glare Conditions	<u>None</u> Slight Gray Bright		Visibility (km)	>10 km		
Survey Information									
Transect Start	Local Time (24 hr)	06:30	Latitude (DD)	63° 18.5' N		Longitude (DD)	090° 38.1' W		
Transect End	Local Time (24 hr)	08:00	Latitude (DD)	—		Longitude (DD)	—		
Observer Location	Outdoors <u>Indoors</u>		Observation Side	Starboard	Port	Bow			
Notes	NO OBSERVATION								

[illegible]

General Information									
Date (DD/MM/YYYY)	28-09-2020		Observer Name	RIKHAB N SHARMA		Height of Eye (m)	19.0 m		
Vessel Information									
Company/Agency	RIGEL SHIPPING		Vessel Type	OIL TANKER		Vessel Heading (compass)	282°		
Vessel Name	DARA DELGADNEZ		Vessel Activity	Moving <input checked="" type="radio"/> Stationary <input type="radio"/>		Vessel Speed (kt)	0.0 kts		
Environmental Information									
Weather	Clear	Partly Cloudy	<input checked="" type="radio"/> 100% Cloud	Fog	Rain	Snow	Sea State (0-9)	1	
Beaufort Wind Force	Calm	<input checked="" type="radio"/> Light Wind	Strong Wind	Gale Force Wind	Stormy		Wave Height (m)	less than 1m	
Wind Direction (deg.)	NW		Glare Conditions	<input checked="" type="radio"/> None	Slight Gray	Bright	Visibility (km)	> 10 km	
Survey Information									
Transect Start	Local Time (24 hr)	06:30	Latitude (DD)	63°57.4'N		Longitude (DD)	093°33.9'W		
Transect End	Local Time (24 hr)	08:00	Latitude (DD)	—		Longitude (DD)	—		
Observer Location	Outdoors	<input checked="" type="radio"/> Indoors	Observation Side	Starboard	Port	Bow	—		
Notes	NO OBSERVATION								

[illegible]

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	04/09/2013		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA U.		Vessel Activity	Moving <u>Stationary</u>					
Environmental Information									
Weather	<u>Clear</u> Partly Cloudy 100% Cloud Fog Rain Snow		Sea State (0-9)	1					
Beaufort Wind Force	Calm <u>Light Wind</u> Strong Wind Gale Force Wind Stormy		Wave Height (m)	0.1					
Wind Direction (Deg)	SW (225)		Glare Conditions	<u>None Bright</u> Slight Grey					
Survey Information									
Transect Start	Local Time (24 hr)	1330	Latitude (DD)	64° 01.8 N					
Transect End	Local Time (24 hr)	1400	Latitude (DD)	64° 01.8 N					
Observer Location	Outdoors <u>Indoors</u>		Observation Side	<u>Starboard</u> Port Bow					
Notes: <u>No Sightings</u>									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	03/AUG/2020		Observer Name	DAVID HULAN					
Company/Agency		COASTAL SHIPPING		Vessel Type	CHEMICAL TANKER				
Vessel Name	KUALA W.		Vessel Activity	Moving <u>Stationary</u>	Vessel Speed (kt)				
Vessel Heading		247							
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	247		Glare Conditions	None <u>Slight Grey</u>	Bright				
Sea State (0-9)	1								
Wave Height (m)	0.1								
Visibility (km)	10+								
Survey Information									
Transect Start	Local Time (24 hr)	1350	Latitude (DD)	64° 01.8 N					
Transect End	Local Time (24 hr)	1400	Latitude (DD)	64° 01.8 N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
			Bow						
Notes: NO SIGHTINGS									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MM/YYYY)	04/AUG/2020		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	CONSTAL SHIPPING		Vessel Type	CHEMICAL TANKER					
Vessel Name	VORLAW W.		Vessel Activity	Moving <u>Stationary</u>					
Environmental Information									
Weather	Clear <u>Partly Cloudy</u> 100% Cloud Fog Rain Snow		Sea State (0-9)	2					
Beaufort Wind Force	Calm Light Wind <u>Strong Wind</u> Gale Force Wind Stormy		Wave Height (m)	0.2m					
Wind Direction (Deg)	225		Glare Conditions	None Bright <u>Slight Grey</u>					
Survey Information									
Transect Start	Local Time (24 hr)	1330	Latitude (DD)	64° 01.8' N					
Transect End	Local Time (24 hr)	1400	Latitude (DD)	64° 01.8' N					
Observer Location	Outdoors <u>Indoors</u>		Observation Side	<u>Starboard</u> Port Bow					
Notes: No Sightings									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey"

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	05/AUG/2020		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA W.		Vessel Activity	Moving <u>Stationary</u>					
Environmental Information									
Weather	Clear <u>Partly Cloudy</u> 100% Cloud Fog Rain Snow		Sea State (0-9)	1					
Beaufort Wind Force	Calm <u>Light Wind</u> Strong Wind Gale Force Wind Stormy		Wave Height (m)	0.1					
Wind Direction (Deg)	292		Glare Conditions	<u>None</u> Slight Grey Bright					
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 01.8' N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 01.8' N					
Observer Location	Outdoors <u>Indoors</u>		Observation Side	<u>Starboard</u> Port Bow					
Notes: <u>No Sightings</u>									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey"



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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	06/AUG/2010		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALU W.		Vessel Activity	Moving	Stationary				
Environmental Information									
Weather	Clear		Partly Cloudy	100% Cloud	Fog Rain Snow				
Beaufort Wind Force	Calm		Light Wind	Strong Wind	Gale Force Wind Stormy				
Wind Direction (Deg)	315		Glare Conditions	None Bright	Slight Grey				
Sea State (0-9)	0		Wave Height (m)	0					
Visibility (km)	10+								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 01.8 N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 01.8 N					
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	1	Water	Y	50	RAFTING	-	Adult	Bleeding	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	07/AUG/2020		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALO W.		Vessel Activity	Moving	Stationary				
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)			Glare Conditions	None Bright	Slight Grey				
Sea State (0-9)	2		Wave Height (m)	0.2					
Visibility (km)	10%								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 01.9 N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 01.8 N					
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	1	Water	Y	50	Rafting	-	ADULT	REEDING	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey"



\*Indicate in Comments if observation of flying birds was during a "snapshot survey"



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MM/YYYY)	09/Jul/2020		Observer Name	DAVID HOLAN					
Company/Agency		COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER				
Vessel Name	LUNAR W		Vessel Activity	Moving <u>Stationary</u>	Vessel Speed (kt)				
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)			Glare Conditions	None	<u>Slight Grey</u>				
Sea State (0-9)		2		Wave Height (m)	0.2				
Visibility (km)		10							
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 01' 8" N					
Transect End	Local Time (24 hr)	1050	Latitude (DD)	64° 01' 8" N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	1	Water	Y	50	LIFTING	-	ADULT	Blue/Grey	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	10/AUG/2013		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COSCO SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA W.		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	090		Glare Conditions	None Bright	<u>Slight Grey</u>				
Sea State (0-9)									
2									
Wave Height (m)									
0.2									
Visibility (km)									
10									
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 08' N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 01.8' N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Bow									
Notes:									
NO SIGHTING									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MM/YY)	11/AUG/20		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA W.		Vessel Activity	Moving	Stationary				
Environmental Information									
Weather	Clear		Partly Cloudy	100% Cloud	Fog				
Beaufort Wind Force	Calm		Light Wind	Strong Wind	Gale Force Wind				
Wind Direction (Deg)	000		Glare Conditions	None	Slight Grey				
Sea State (0-9)		1		Wave Height (m)					
0.1		Visibility (km)		10+					
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' 22" N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 07' 22" N					
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
HELLING WING	2	WATER	Y	30	RAFTING	-	ADULT	BREEDING	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MM/YY)	12/AUG/20		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	RIVALDO W.		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	000		Glare Conditions	<u>None</u>	Slight Grey				
Sea State (0-9)	1		Wave Height (m)	0.1					
Visibility (km)	10								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07.2' N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 07.2' N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
HELLING GULL	2	WATER	Y	30	RAFTING	—	ADULT	BREEDING	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	13/AUG/2020		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	Huron Coastline Scientific		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA W.		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	135		Glare Conditions	None	<u>Slight Grey</u>				
Sea State (0-9)	1		Wave Height (m)	0.1					
Visibility (km)	10+								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 07' N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	2	Water	Y	25	LIFTING	-	ADULT	BREEDING	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MM/YYYY)	14/NOV/2010		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SITTING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALIQ D.		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Sea State (0-9)	3								
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wave Height (m)	0.6								
Wind Direction (Deg)	135		Glare Conditions	<u>None</u>	Slight Grey				
Visibility (km)	10+								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' 2" N					
Transect End	Local Time (24 hr)	1050	Latitude (DD)	64° 07' 2" N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Bow									
Notes: NO SIGHTINGS									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey"

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MM/YY)	15/AUG/2020		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA D.		Vessel Activity	Moving	Stationary				
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)			Glare Conditions	None	Slight Grey				
Sea State (0-9)		1		Wave Height (m)					
0.1		Visibility (km)		10					
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' 21" N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 07' 21" N					
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	1	Water	Y	35	RAFTING	-	ADULT	Bleeding	-

\*Indicate in Comments if observation of flying birds was during a "snapshot survey"



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	16/AUG/2022		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALUQ U.		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	315		Glare Conditions	<u>None</u>	Slight Grey				
Sea State (0-9)	2		Wave Height (m)	0.2					
Visibility (km)	10+								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' 2" N					
Transect End	Local Time (24 hr)	1050	Latitude (DD)	64° 07' 2" N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Notes: <u>NO SIGHTING</u>									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MM/YY)	17/AUG/2020		Observer Name	DAVID HULAN					
Vessel Information									
Company/Agency	COASTAL SERVICES LTD		Vessel Type	CHRYSLER TRAILER					
Vessel Name	LIVALLIA W-		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	315		Glare Conditions	<u>None</u>	Slight Grey				
Sea State (0-9)	3		Wave Height (m)	0.6					
Visibility (km)	10								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' 2" N					
Transect End	Local Time (24 hr)	1820	Latitude (DD)	64° 07' 2" N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	Port				
Notes: NO SIGHTING									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	18/AUG/2020		Observer Name	DAVID HOLAN					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUMANG D		Vessel Activity	Moving	<u>Stationary</u>				
Environmental Information									
Weather	Clear	Partly Cloudy	<u>100% Cloud</u>	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	337		Glare Conditions	None	Slight Grey				
Sea State (0-9)	1		Wave Height (m)	0.1					
Visibility (km)	10								
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 07' 2" N					
Transect End	Local Time (24 hr)	1050	Latitude (DD)	64° 07' 2" N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	1	WATER	1	40	RAFTING	-	ADULT	Bleeding	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		<b>Moving Vessel</b>		<b>Stationary Vessel</b>					
General Information									
Date (DD/MM/YY)	19 Aug 2020		Observer Name	David Holan					
Vessel Information									
Company/Agency	Coburn Shipping Ltd		Vessel Type	Chemical Tanker					
Vessel Name	Lualaba W		Vessel Activity	Moving	<b>Stationary</b>				
Environmental Information									
Weather	<b>Clear</b>	Partly Cloudy	100% Cloud	Fog	Rain				
Beaufort Wind Force	<b>Calm</b>	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	NIL		Glare Conditions	None	Slight Grey				
Survey Information									
Transect Start	Local Time (24 hr)	1600	Latitude (DD)	64° 17.6' N					
Transect End	Local Time (24 hr)	1830	Latitude (DD)	64° 17.6' N					
Observer Location	Outdoors	<b>Indoors</b>	Observation Side	<b>Starboard</b>	Port				
Notes: No Sightings									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey"

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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	20/NOV/2020		Observer Name	DAVID HULAK					
Vessel Information									
Company/Agency	COASTAL SHIPPING LTD		Vessel Type	CHEMICAL TANKER					
Vessel Name	KUALA W.		Vessel Activity	Moving <u>Stationary</u>					
Environmental Information									
Weather	Clear Partly Cloudy 100% Cloud Fog <u>Rain</u> Snow		Sea State (0-9)	5					
Beaufort Wind Force	Calm Light Wind Strong Wind <u>Gale Force Wind</u> Stormy		Wave Height (m)	2.0					
Wind Direction (Deg)	140		Glare Conditions	<u>None Bright</u> Slight Grey					
Survey Information									
Transect Start	Local Time (24 hr)	1000	Latitude (DD)	64° 17.6 N					
Transect End	Local Time (24 hr)	1030	Latitude (DD)	64° 17.6 N					
Observer Location	Outdoors <u>Indoors</u>		Observation Side	Starboard	Port				
Bow									
Notes: <u>No Sightings</u>									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



[illegible]

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MM/YYYY)	08/AUG/2020		Observer Name	Curtis Buckmaster					
Height of Eye (m)		25m							
Vessel Information									
Company/Agency	Koski Shipping (Petro-Nav)		Vessel Type	CHEMICAL TANKER					
Vessel Name	KIVALIKA W.		Vessel Activity	Moving	Stationary				
Vessel Speed (kt)		—							
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	Light Wind	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	NIL		Glare Conditions	None	Slight Grey				
Sea State (0-5)		0							
Wave Height (m)		0							
Visibility (km)		30							
Survey Information									
Transect Start	Local Time (24 hr)	0800	Latitude (DD)	64.07.4'N					
Transect End	Local Time (24 hr)	1200	Latitude (DD)	64.07.4'N					
Observer Location	Outdoors	Indoors	Observation Side	Starboard	Port				
Bow									
Notes:									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Glaucois Gull	1	Water	N	150	Feeding	NIL	Adult	Breeding	—

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	23/Aug/2020		Observer Name	Adam Tanner					
Height of Eye (m)		12m							
Vessel Information									
Company/Agency	Coastal Shipping		Vessel Type	Chrom. Type II Tug					
Vessel Name	Kivalliq W.		Vessel Activity	<u>Moving</u> Stationary					
Vessel Speed (kt)		13.5 Kts							
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Sea State (0-9)	1								
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wave Height (m)	0.3m								
Wind Direction (Deg)	290		Glare Conditions	None	<u>Slight</u> Grey				
Visibility (km)	20km								
Survey Information									
Transect Start	Local Time (24 hr)	1821	Latitude (DD)	63°53'1					
Transect End	Local Time (24 hr)		Latitude (DD)						
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Bow									
Notes: <u>Sighted from Bridge</u>									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Eider	75	Water	N	120m	Feeding	—	Adult	Breeding	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Marine Mammal Sightings Form (circle options that are characterized as appropriate)										
General Information										
Date (DD/M/YYYY)	09-23 OCT 2020			Observer Name	M. FLYNN			Height of Eye (m)	20	
Vessel Information										
Company/Agency	Rigel / PNI			Vessel Type	Tanker			Vessel Heading (compass)		
Vessel Name	Mara Delacors			Vessel Activity	Moving			Vessel Speed (kt)		
Environmental Information										
Weather	Clear			Partly Cloudy	100% Cloud			Fog	Rain	Snow
Beaufort Wind Force	Calm			Light Wind	Strong Wind			Gale Force Wind	Stormy	
Wind Direction (deg)				Chlorophyll Conditions	None			Slight Grey	Bright	
Sighting Information										
Transect Start	Local Time (24 hr)			Latitude (DD)			Longitude (DD)			
Transect End	Local Time (24 hr)			Latitude (DD)			Longitude (DD)			
Observer Location	Outdoors			Indoors			Observation Side	Starboard	Port	Bow
Notes	No Marine Mammals sighted during voyage, in Hudson Bay/Hudson Strait									

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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	09 OCT 2020		Observer Name	M. Flynn					
		Height of Eye (m)		20					
Vessel Information									
Company/Agency	Rigel		Vessel Type	Tug					
Vessel Name	Marla Desjardins		Vessel Activity	<u>Moving</u> Stationary					
		Vessel Speed (kt)		13					
Environmental Information									
Weather	<u>Clear</u> Partly Cloudy 100% Cloud Fog Rain Snow				Sea State (0-9)				
Beaufort Wind Force	Calm <u>Light Wind</u> Strong Wind Gale Force Wind Stormy				Wave Height (m)				
Wind Direction (Deg)	45°		Glare Conditions	<u>None</u> Slight Grey Bright					
		Visibility (km)		10+					
Survey Information									
Transect Start	Local Time (24 hr)	1200	Latitude (DD)	61°26'N					
Transect End	Local Time (24 hr)	1300	Latitude (DD)	61°33'N					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
		Bow							
Notes: Transit Hudson Bay									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	3	Fly	Y	40-100	Follow/Var	Var.	Adult	Non-Breeding	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

[illegible]

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		<u>Moving Vessel</u>		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	11 OCT 2020	Observer Name	M. FLYNN	Height of Eye (m)	18				
Vessel Information									
Company/Agency	Rigel	Vessel Type	Tanker	Vessel Heading	205° T				
Vessel Name	Marie Desroches	Vessel Activity	<u>Moving</u> Stationary	Vessel Speed (kt)	13				
Environmental Information									
Weather	Clear	<u>Partly Cloudy</u>	100% Cloud	Fog	Rain				
Beaufort Wind Force	Calm	<u>Light Wind</u>	Strong Wind	Gale Force Wind	Stormy				
Wind Direction (Deg)	135°	Glare Conditions	<u>None</u> Slight Grey	Bright	Visibility (km)				
Survey Information									
Transect Start	Local Time (24 hr)	1500	Latitude (DD)	63° 11' N	Longitude (DD)				
Transect End	Local Time (24 hr)	1600	Latitude (DD)	62° 59' N	Longitude (DD)				
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	<u>Starboard</u>	Port				
Bow									
Notes: Transit Ellis Island to Rankin Inlet									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	10	Fly	Y	10-100	Follow/Var.	205°	Adult	Non-Breeding	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one): <u>Moving Vessel</u> <u>Stationary Vessel</u>											
General Information											
Date (DD/MMM/YYYY)		12 OCT 2020		Observer Name		M. FLYNN		Height of Eye (m)		18	
Vessel Information											
Company/Agency		Rise		Vessel Type		Tanker		Vessel Heading		100°T	
Vessel Name		Mona Desgagné		Vessel Activity		Moving <u>Stationary</u>		Vessel Speed (kt)		—	
Environmental Information											
Weather		Clear Partly Cloudy 100% Cloud <u>Fog</u> <u>Rain</u> Snow		Sea State (0-9)		6					
Beaufort Wind Force		Calm Light Wind Strong Wind <u>Gale Force Wind</u> Stormy		Wave Height (m)		2-3					
Wind Direction (Deg)		95°		Glare Conditions		<u>None</u> Slight Grey Bright		Visibility (km)		4	
Survey Information											
Transect Start		Local Time (24 hr)		1300		Latitude (DD)		62°47' N		Longitude (DD)	091°59' W
Transect End		Local Time (24 hr)		1400		Latitude (DD)		11		Longitude (DD)	11
Observer Location		Outdoors <u>Indoors</u>		Observation Side		<u>Starboard</u> Port		Bow			
Notes: Anchorage Raskin Inlet Horseshoe											
Seabird Sighting Information											
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*		
									No Observations		

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".



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

Survey Type (circle one):		Moving Vessel		<u>Stationary Vessel</u>					
General Information									
Date (DD/MMM/YYYY)	13 OCT 2020		Observer Name	M. FLYNN					
		Height of Eye (m)		18					
Vessel Information									
Company/Agency	Rip		Vessel Type	Tanker					
Vessel Name	More Desegues		Vessel Activity	Moving <u>Stationary</u>					
		Vessel Heading		130° T					
		Vessel Speed (kt)		—					
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	<u>Rain</u> Snow				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	135°		Glare Conditions	<u>None Bright</u>	Slight Grey				
		Sea State (0-9)		5					
		Wave Height (m)		2					
		Visibility (km)		5					
Survey Information									
Transect Start	Local Time (24 hr)	1300	Latitude (DD)	62° 47' N					
Transect End	Local Time (24 hr)	1400	Latitude (DD)	—					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	<u>Port</u> Bow				
Notes: Anchorage Rankin Inlet Horseshoe									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
									No Observations

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".

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

Survey Type (circle one):		Moving Vessel		Stationary Vessel					
General Information									
Date (DD/MMM/YYYY)	14 OCT 2020		Observer Name	M. FLYNN					
Height of Eye (m)		18							
Vessel Information									
Company/Agency	R&W		Vessel Type	Tanker					
Vessel Name	Marie Desjardis		Vessel Activity	Moving <u>Stationary</u>					
Vessel Speed (kt)		—							
Environmental Information									
Weather	Clear	Partly Cloudy	100% Cloud	Fog	<u>Rain</u> Snow				
Beaufort Wind Force	Calm	Light Wind	<u>Strong Wind</u>	Gale Force Wind	Stormy				
Wind Direction (Deg)	135°		Glare Conditions	<u>None Bright</u> Slight Grey					
Sea State (0-9)		5							
Wave Height (m)		2							
Visibility (km)		5							
Survey Information									
Transect Start	Local Time (24 hr)	1300	Latitude (DD)	62° 47' N					
Transect End	Local Time (24 hr)	1400	Latitude (DD)	11					
Observer Location	Outdoors	<u>Indoors</u>	Observation Side	Starboard	<u>Port</u> Bow				
Notes: Anchorage Raraka Inlet Horseshoe									
Seabird Sighting Information									
Species	Count	Observation Type (Fly or Water)	In Transect (Y/N)	Distance (m)	Behaviour (escape flight, rafting, other)	Flight Direction (Deg)	Age (Adult/Young)	Plumage (breeding/non-breeding/molt)	Comments*
Herring Gull	2	Fly	Y	50	Var.	Var.	Adult	Non-Breeding	
Glaucous G.	1	Fly	Y	10	Var.	Var.	Adult	Non-Breeding	

\*Indicate in Comments if observation of flying birds was during a "snapshot survey".