

DOCUMENT CONTROL SHEET

Document Title: Seabird Data Summary – West Hercules: Sitka O-02 and Sitka O-02A Wellsites July 25, 2022, to November 04, 2022

Project/Document Number: IES-BMM-EQU-9999-20-2023

Document Description: An overview of all seabird and mammal observations recorded on the West Hercules from July 25, 2022, to November 04, 2022

Number of Pages: 78 Level of Control: Uncontrolled

Version History

Version	Date	Revised by	Summary of Changes
00	January 06, 2023	Kelsey McCarthy	Original Published Version

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Date: January 06, 2023	Date: January 06, 2023

Circulation

Recipient	Total Hard Copies	Total Digital Copies
Equinor Canada Ltd.	0	1
PAL Aerospace	0	1

Document Control Sheet Doc: AD-016 Page 1 of 1 Rev: 14-Jul-17





Seabird Data Summary West Hercules: Sitka O-02 and Sitka O-02A Wellsites July 25, 2022, to November 04, 2022

Vessel: West Hercules

Position: 47°51.87′ North, 046°45.52′ West (Sitka O-02)

47°51.75′ North, 046°45.37′ West (Sitka O-02A)

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CWS Permit Number: LS2766

Document Ref #: IES-BMM-EQU-9999-20-2023

Submitted: January 06, 2023

Version: 00





Document Control Log

Document Title:		Seabird Data Summary – West Hercules July 25, 2022, to November 04, 2022			
PAL Aerospace Document #:		IES-B	IES-BMM-EQU-9999-20-2023		
Initial Date: Ja		Janua	January 06, 2023		
Record of Revisions					
Revision #	Date		Reason for Revision		
00	January 06, 202	3	Original Published Version		

REV: 06-JAN-23

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1.0 Introduction

Equinor Canada Ltd. (Equinor) contracted PAL Aerospace (PAL) Ice and Environmental Services (IES) to provide seabird and marine mammal monitoring services in support of operations for the West Hercules in transit to, and on the Sitka O-02 and Sitka O-02A wellsites. The West Hercules departed the Cambriol G-92 wellsite on July 25, 2022, at 1826z, arriving at the Sitka O-02 wellsite on July 25, 2022, at 2200z (*Figure 1*), remaining there from July 25, 2022, at 2200z until September 15, 2022, at 1405z. Afterwards, the West Hercules moved from the Sitka O-02 wellsite to the Sitka O-02A wellsite (*Figure 2*), in transit from September 15, 2022, at 1405z until September 16, 2022, at 2205z. The West Hercules remained at the Sitka O-02A wellsite until October 25, 2022, at 0015z. The West Hercules then moved from the Sitka O-02A wellsite back to Sitka O-02 and was in transit until October 25, 2022, at 0145z. The Mobile Offshore Drilling Unit (MODU) stayed at the Sitka O-02 wellsite until October 31, 2022, at 2100z. Monitoring services were provided until the West Hercules arrived back in Bay Bulls at the end of the project on November 04, 2022, at 0630z.

The West Hercules platform (*Figure 3*) was staffed with two PAL Marine Mammal & Seabird Observers (MMSOs) from July 25, 2022 (when the West Hercules left the Cambriol G-92 wellsite), to November 04, 2022 (when the West Hercules arrived back at Bay Bulls) providing 24-hour coverage. The MMSOs conducted hourly seabird surveys each day and visual observations of marine mammals.

There was one exception to the above when the daytime MMSO contracted COVID-19. On August 09, 2022, the MMSO was sent ashore, and the nighttime observer was re-tasked with switching to daytime observations. The next rotational observer could not be deployed immediately in accordance with CAPP's Fatigue Management in the Canada – Newfoundland and Labrador Offshore Petroleum Industry's standard of a minimum seven-day rest period for a regular 21-day rotation. Therefore, nighttime observations did not recommence until August 13, 2022, when the MMSO arrived on a vessel transfer.

The PAL MMSOs were responsible for systematic searches for stranded seabirds on the Sitka O-02 and Sitka O-02A wellsites.

All data collected on the West Hercules was delivered to and stored in a local database at PAL and used to compile this report. For environmental data comparison, all times and dates are in Coordinated Universal Time (UTC).

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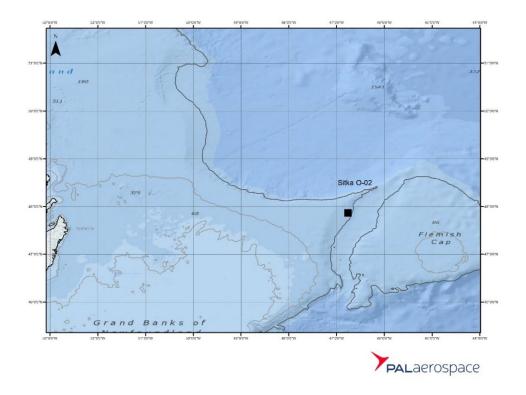


Figure 1: Sitka O-02 Well Site Location (47°51.87'N, 046°45.52'W)

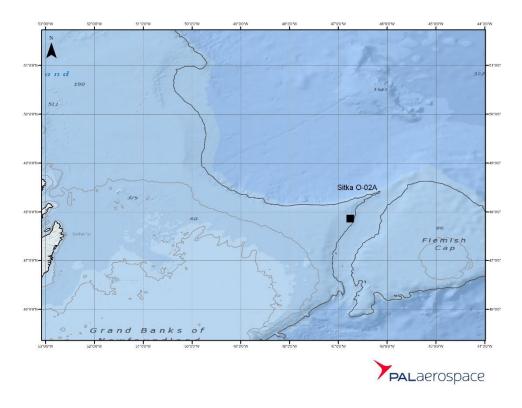


Figure 2: Sitka O-02A Well Site Location (47°51.75′N, 046°45.37′W) SEABIRD DATA SUMMARY – WEST HERCULES: SITKA O-02 AND SIKTA O-02A WELLSITES

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Figure 3: West Hercules

2.0 Summary of Seabird Monitoring and Recovery

Equinor conducted a seabird monitoring program on the Sitka O-02 and Sitka O-02A well sites from July 25, 2022, to November 04, 2022. The West Hercules arrived on location at the Sitka O-02 well site on July 25, 2022, at 2200z, and remained there until September 15, 2022, at 1405z. The West Hercules arrived on location at the Sitka O-02A well site on September 16, 2022, at 2205z, and remained there until October 25, 2022, at 0015z. Equinor continued conducting seabird monitoring on the Sitka O-02 wellsite from October 25, 2022, at 0145z, until October 31, 2022, at 2100z. On October 31, 2022, at 2100z, the West Hercules departed from well site Sitka O-02 as the project was completed and returned to Bay Bulls on November 04, 2022, at 0630z.

The onboard MMSO conducted observations during their time on the West Hercules. These observations were completed per the Seabird Survey, Handling, and Observation Protocol (Equinor, 2022).

2.1 Surveys from Moving Platforms

There were no moving platform surveys conducted on the West Hercules while in transit to or at the Sitka wellsites, as there was no requirement for movement once the MODU arrived on site, and the MODU's steaming speed was less than 4 knots (*Seabird Survey, Handling, and Observation Protocol,* Equinor, 2022).

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When moving platform surveys are to be conducted, the MMSO is trained to carry out surveys looking forward on the vessel, scanning at a 90° angle from either the port or starboard side of the vessel, covering a 300-metre band (*Figure 4*).

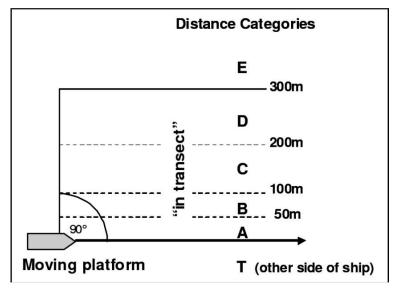


Figure 4: Survey Method using a 90° Scan. Source: Seabird Survey, Handling, and Observation Protocol.

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MMSOs complete scanning using the naked eye. Binoculars are used to confirm species and other details (i.e. moult, age, carrying fish, etc.). However, when large concentrations of birds occur in the survey area and birds fly away as the vessel approaches, binoculars are to be used to count individuals.

The MMSO would also scan ahead regularly to increase the likelihood of detecting birds prone to diving as the vessel approached.

2.2 Surveys from Stationary Platforms

MMSOs onboard the offshore platform, while it was on location, conducted observations using instantaneous counts, or snapshots, of birds within a 300m radius semi-circle area off the port side of the helideck that is scanned at regular intervals throughout the day. These surveys lasted only a few seconds.

MMSOs conducted observations over 12-hour shifts, beginning at dawn each day and finishing at dusk. Any observations during the shift would be recorded and logged digitally in the provided Canadian Wildlife Services (CWS) Access database and recorded physically on the record sheet for a stationary platform survey.

The surveys were conducted outdoors whenever possible, as close to the MODU's edge as permitted. In addition, MMSOs scanned from the same location each time to increase the comparability among scans.

Surveys are conducted by scanning a 180° arc, prioritizing birds within a 300 m semi-circle (*Figure 5*).

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The semi-circle is divided into five zones

A: 0 - 50m

• B: 50 - 100m

C: 100 - 200m

D: 200 - 300m

• E: >300m

The MMSO visually swept the area only once per scan, from one side to the other. All birds on the water and in flight were systematically recorded at that time. The distance to birds from the observer was estimated and recorded for all birds. Range sticks were also used to gauge the distance to birds when the MMSO could see the horizon. Binoculars and spotting scopes were utilized to confirm species identification and other details as necessary.

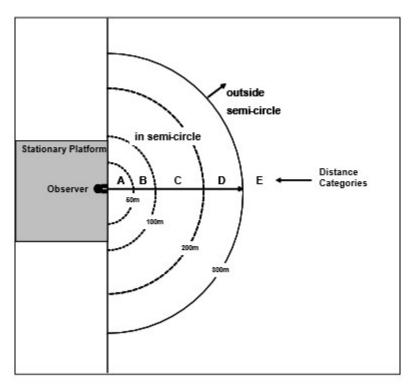


Figure 5: 180° Survey from a Stationary Platform. Source: Seabird Survey, Handling, and Observation

Protocol. Equinor Canada Ltd. Newfoundland

The same area was surveyed once every hour during daylight hours, regardless of whether birds were present or not, while at the Sitka O-02 and Sitka O-02A wellsites. When the entire width of the 300-metre semi-circle was not visible, the observer indicated the limit of visibility on the datasheet. When no birds were detected during a scan, the MMSO recorded the whole observation, leaving any bird information blank. Any gaps between observations would be due to the requirement of helicopter operations, crew

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changes, onboard operation (i.e. drills), or when the weather was too bad to complete the observation (i.e. no visibility due to fog.)

2.3 Stranded Seabird Search Procedures

The PAL MMSO checked the decks for stranded and dead birds at least once daily. All crew members were also requested to alert the MMSO if stranded birds were found. The MMSO conducts daily inspections to search for potentially stranded birds, utilizing the pattern identified in *Figure 6*. The area covers 630 metres on the main deck, an additional 90 metres on the navigation deck, and an additional 30 metres on the bridge top deck, totalling 750 metres, as indicated by the line in the figure below. This survey quantifies species numbers and status (alive or dead) and the timing of migratory bird strandings in the area. In addition, this survey consists of outlining the area searched and all findings in the search.

The capture and handling of migratory birds requires authorization under the *Migratory Birds Convention Act* (1994) and *Migratory Bird Regulations* (2022). Equinor has obtained a Capture and Handling of Migratory Birds Permit and has met the Canadian Wildlife Service requirements for permit issuance.

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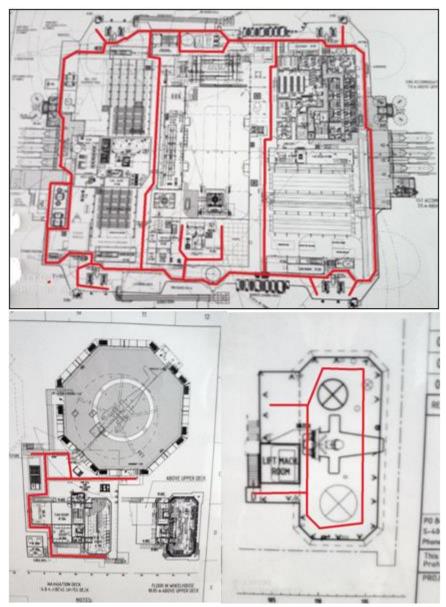


Figure 6: West Hercules Search plan (750 Metres)

2.4 Summary of Marine Mammal and Sea Turtle Monitoring

The onboard MMSO conducted visual observations on the West Hercules. They acted as qualified MMSOs, primarily from the bridge wings during daylight hours. Several marine mammal sightings were observed throughout the project period amongst the various wellsites.

Visual scans were made with the naked eye and with 10x50 binoculars with a range reticule. The detection cues that were used were the presence of groups of birds, unexpected splashes, blows, and black objects breaking the surface. Whenever possible, sightings would have been photographed to aid species identification.

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Species are identified based on physical characteristics and behaviours. Identification is facilitated by consulting relevant field guides and by observer experience.

3.0 Results

The following sections outline the results from stationary seabird surveys, moving seabird surveys, stranded seabird searches, and marine mammals or sea turtles identified throughout the project.

3.1 Seabird Sightings

3.1.1 Seabird Sightings in Transit to Sitka O-02

PAL MMSOs conducted seabird monitoring services while in transit from the Cambriol G-92 wellsite to the Sitka O-02 well site from July 25, 2022, at 1826z until July 25, 2022, at 2200z. During this period, a total of 10 seabird observations recorded 27 individual seabirds. Of these, 1 observation (10.0% of all observations) resulted in no seabirds identified in the observer's facility's viewing distance.

The most frequent individual seabird sighting was the Northern Fulmar (21 birds sighted, 77.8% of all birds sighted), followed by the Great Shearwater (6 birds sighted, 22.2% of all birds sighted).

Table 1 and *Figure 7* summarize all seabird observations while in transit from the Cambriol G-92 wellsite to the Sitka O-02 well site on July 25, 2022.

Table 1: Seabird Sightings in Transit to Sitka O-02 Well Site

Species	Number
Great Shearwater	6
Northern Fulmar	21
Total	27

Observation	Number
Total Observations	10
No Birds	1

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Figure 7: Seabird Sightings in Transit to Sitka O-02 Well Site

3.1.2 Seabird Sightings for Sitka O-02

PAL MMSOs conducted seabird monitoring services on the Sitka O-02 well site from July 25, 2022, at 2200z, to September 15, 2022, at 1450z. During this period, a total of 1,991 seabird observations recorded 19,604 individual seabirds. Of these, 177 observations (8.9% of all observations) resulted in no seabirds identified in the MMSOs facility's viewing distance.

The most frequent seabird sighting was the Northern Fulmar (13,445 birds sighted, 68.6% of all birds sighted), followed by the Great Shearwater (5,331 birds sighted, 27.2% of all birds sighted).

Table 2 and *Figure 8* summarize all seabird observations recorded on the Sitka O-02 location from July 25, 2022, to September 15, 2022.





Table 2: Seabird Sightings from Sitka O-02 Well Site

Species	Number
Great Shearwater	5,331
Northern Fulmar	13,445
Black-legged Kittiwake	12
Family: Hydrobatid Storm-Petrels	6
Greater Black-backed Gull	202
Genus: Gulls (Larus, Xema, Rissa, Pagophila, Rhodostethia)	2
Great Skua	1
Herring Gull	5
Leach's Storm-Petrel	534
Lesser Black-backed Gull	13
Manx Shearwater	2
Northern Gannet	6
Parasitic Jaeger	1
Sooty Shearwater	42
South Polar Skua	1
Wilson's Storm Petrel	1
Total	19,604

Observation	Number
Total Observations	1,991
No Birds	177

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Figure 8: Seabird Sightings from Sitka O-02 Well Site

3.1.3 Seabird Sightings in Transit to Sitka O-02A

PAL MMSOs conducted seabird monitoring services while in transit from the Sitka O-02 wellsite to the Sitka O-02A well site from September 15, 2022, at 1405z until September 16, 2022, at 2205z. During this period, a total of 76 seabird observations recorded 469 individual seabirds. Of these, zero observations resulted in no seabirds being identified in the observer's facility's viewing distance.

The most frequent seabird sighting was the Northern Fulmar (415 birds sighted, 88.5% of all birds sighted), followed by the Great Shearwater (40 birds sighted, 8.5% of all birds sighted).

Table 3 and *Figure 9* summarize all seabird observations while in transit from the Sitka O-02 wellsite to the Sitka O-02A well site from September 15, 2022, to September 16, 2022.

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Table 3: Seabird Sightings in Transit to the Sitka O-02A Well Site

Species	Number
Great Shearwater	40
Northern Fulmar	415
Sooty Shearwater	1
Great Black-Backed Gull	13
Total	469

Observation	Number
Total Observations	76
No Birds	0

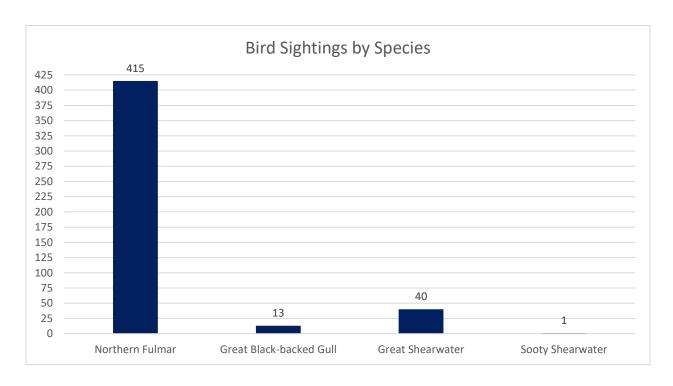


Figure 9: Seabird Sightings in Transit to the Sitka O-02A Well Site

3.1.4 Seabird Sightings for Sitka O-02A

PAL MMSOs conducted seabird monitoring services on the Sitka O-02A well site from September 16, 2022, at 2205z, to October 25, 2022, at 0015z. During this period, a total of 1,342 seabird observations recorded 13,087 individual seabirds. Of these, 79 observations (5.9% of all observations) resulted in no seabirds identified in the observer's facility's viewing distance.

The most frequent seabird sighting was the Great Black-Backed Gull (7,338 birds sighted, 56.1% of all birds sighted), followed by the Northern Fulmar (2,898 individual birds sighted, 22.1% of all birds sighted).

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Table 4 and *Figure 10* summarize all seabird observations recorded on the Sitka O-02A location from September 16, 2022, to October 25, 2022.

Table 4: Seabird Sightings from Sitka O-02A Well Site

Species	Number
Great Shearwater	1,677
Northern Fulmar	2,898
Black-legged Kittiwake	1,119
Family: Hydrobatid Storm-Petrels	19
Great Black-Backed Gull	7,338
Genus: Jaegars	2
Magnificent Frigatebird, Man-o'- war	1
Leach's Storm-Petrel	14
Lesser Black-backed Gull	4
Peregrine Falcon	3
Sooty Shearwater	12
Total	13,087

Observation	Number
Total Observations	1,342
No Birds	79

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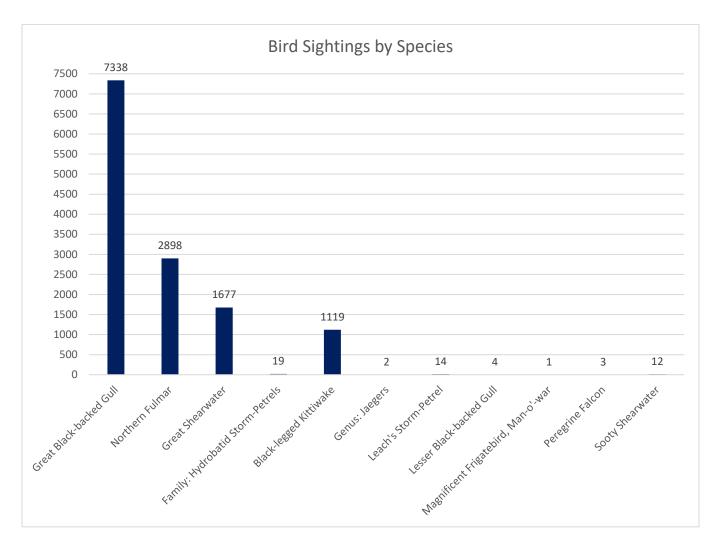


Figure 10: Seabird Sightings from the Sitka O-02A Well Site

3.1.5 Seabird Sightings in Transit to Sitka O-02

The movement from Sitka O-02A to Sitka O-02 occurred at night, from October 25, 2022, from 0015z to 0145z; therefore, no observations were taken.

3.1.6 Seabird Sightings for Sitka O-02

PAL MMSOs conducted seabird monitoring services on the Sitka O-02 well site from October 25, 2022, at 0145z, to October 31, 2022, at 2100z. During this period, a total of 316 seabird observations recorded 5,028 individual seabirds. Of these, zero observations resulted in no seabirds identified in the observer's facility's viewing distance.

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The most frequent individual seabird sighting was the Great Black-Backed Gull (4,005 individual birds sighted, 79.7% of all birds sighted), followed by the Northern Fulmar (363 individual birds sighted, 7.2% of all birds sighted).

Table 5 and Figure 11 summarize all seabird observations recorded on the Sitka O-02 location from October 25, 2022, to October 31, 2022.

Table 5: Seabird Sightings from Sitka O-02 Well Site

Species	Number
Black-legged Kittiwake	203
Glaucous Gull	15
Great Black-backed Gull	4005
Great Shearwater	355
Herring Gull	81
Lesser Black-Backed Gull	2
Northern Fulmar	363
Sooty Shearwater	2
Thick-billed Murre	2
Total	5,028

Observation	Number
Total Observations	316
No Birds	0

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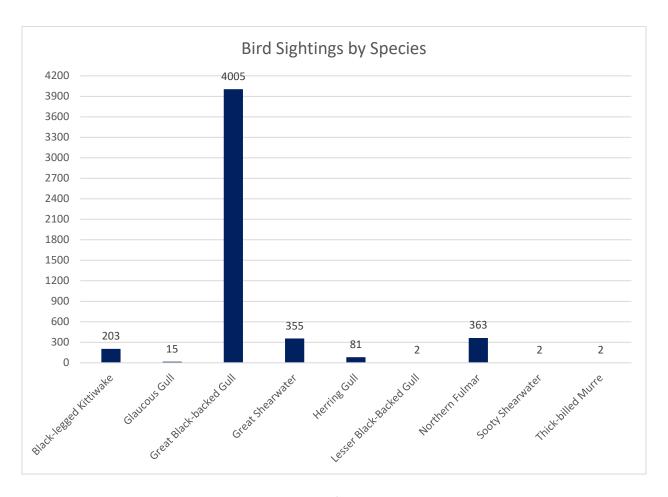


Figure 11: Seabird Sightings from the Sitka O-02 Well Site

3.1.7 Seabird Sightings for Sitka 0-02 in Transit to Bay Bulls

PAL MMSOs conducted seabird monitoring services during the transit from Sitka O-02 to Bay Bulls, NL, from October 31, 2022, at 2100z, to November 04, 2022, at 0630z. During this time, the PAL MMSOs completed stationary platform surveys as the MODU's steaming speed remained under 4 knots (Equinor, 2022).

During this period, a total of 44 seabird observations recorded 109 individual seabirds. Of these, 14 observations (31.8% of all observations) resulted in no seabirds identified in the observer's facility's viewing distance.

The most frequent individual seabird sighting was the Great Black-Backed Gull (67 individual birds sighted, 61.5% of all birds sighted).

Table 6 and *Figure 12* summarize all seabird observations recorded during the transit from Sitka O-02 to Bay Bulls from October 31, 2022, to November 04, 2022.

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Table 6: Seabird Sightings in Transit from Sitka O-02 Well Site to Bay Bulls

Species	Number
Black-legged Kittiwake	24
Dovekie	1
Family: Auks	9
Glaucous Gull	1
Great Black-Backed Gull	67
Northern Fulmar	6
Snow Bunting	1
Total	109

Observation	Number
Total Observations	44
No Birds	14

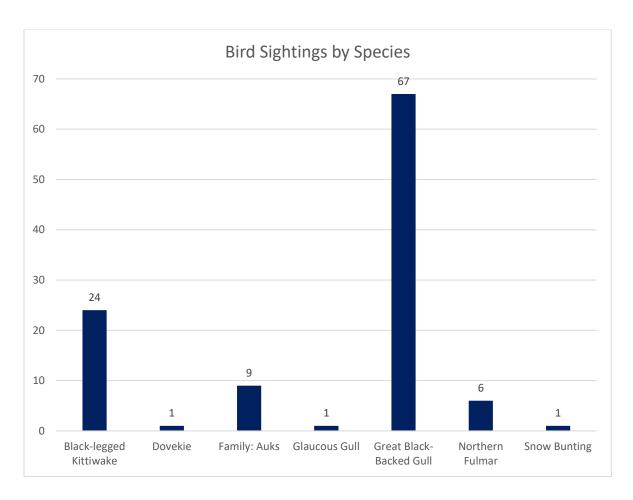


Figure 12: Seabird Sightings in Transit from the Sitka O-02 Well Site to Bay Bulls, NL

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3.2 Stranded Seabird Searches

3.2.1 Stranded Seabird Searches In Transit to Sitka O-02

Throughout the time that the West Hercules was in transit from the Cambriol G-92 wellsite to the Sitka O-02 wellsite, from July 25, 2022, at 1826z until July 25, 2022, at 2200z, there were no stranded seabird searches completed.

3.2.2 Stranded Seabird Searches for Sitka O-02

Throughout the time that the West Hercules was in operation on the Sitka O-02 well site, there were a total of 68 stranded seabird searches. 43 (63.2% of all searches) had no seabirds found. 21 (30.9% of all searches) had one seabird present. Finally, 4 (5.9% of all searches) identified more than one seabird during the search. *Table 7* outlines the number and the results of the searches.

Table 7: Seabird Strandings for the Sitka O-02 Well Site

Total Stranded Seabird Searches	No Seabirds Present	One Seabird Present	Multiple Seabirds Present
68	43	21	4
	63.2%	30.9%	5.9%

The Leach's Storm-Petrel was the most commonly identified stranding, accounting for 31 (93.9%) of all identified birds found. Please see *Table 8, Table 9,* and *Table 10* for reference to all findings.

Due to one of the MMSOs contracting COVID-19 while on the West Hercules, there were no stranded seabird searches completed on the morning of August 14, 2022. After the replacement observer arrived offshore, the morning stranded seabird search was delegated to the appropriate personnel. As a result, the morning deck search was not completed for this date only.

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Table 8: Bird Strandings (1 of 3)

Date	(yyyy/m	m/dd)	2022-07-30	2022-07-31	2022-08-05	2022-08-06	2022-08-06	2022-08-10	2022-08-11	2022-08-16
	f strandir or Name	ng (Lat/Long, e)	Grid #3B	Grid #C5	Grid #C2	Grid #D1	Grid #C2	Grid #F4, #E5	Grid #D4 Lower Moonpool	Grid #C2 Lower Moonpool
E	Bird Speci	ies	Leach's Storm- Petrel	Leach's Storm- Petrel, Northern Gannet	Leach's Storm- Petrel	Leach's Storm- Petrel				
Total #	of Stranc	ded Birds	2	1	1	1	1	2	1	7
	#	Oiled	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	0	0	1	0	0
		# Send Ashore	0	0	0	0	0	0	1	1
	# Died in Care # Oiled Released Alive		0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0
	Not Oiled	# Released Alive	2	1	1	1	1	1	0	6
		# Sent Ashore	0	0	0	0	0	0	0	0
	Fog (y/n)	Υ	Υ	Υ	Υ	Υ	Υ	N	Υ
	Rain (y/r	n)	N	Υ	Υ	N	N	Υ	N	Υ





Table 9: Bird Strandings (2 of 3)

Date	(yyyy/mi	m/dd)	2022-08-17	2022-08-18	2022-08-19	2022-08-19	2022-08-19	2022-08-22	2022-08-22	2022-08-22
	f strandin or Name	g (Lat/Long,)	Lower Moonpool	Grid #E5	Grid #D3	Grid #C2	N/A	Grid #D5	Grid #D2	Grid #C3 Lower Moonpool
В	Bird Speci	es	Leach's Storm- Petrel							
Total #	of Strand	ed Birds	2	1	1	1	1	1	1	1
	#	Oiled	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	0	0	0	0	0
		# Send Ashore	0	0	0	0	0	0	0	0
		# Died in Care	1	0	0	0	0	0	0	0
	Oiled	# Released Alive	1	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0
	Not Oiled	# Released Alive	0	1	1	1	1	1	1	1
		# Sent Ashore	0	0	0	0	0	0	0	0
	Fog (y/n)		Υ	Υ	Υ	Υ	Υ	N	N	N
	Rain (y/n)	N	Υ	Υ	Υ	Υ	N	N	N





Table 10: Bird Strandings (3 of 3)

Date	(yyyy/m	m/dd)	2022-08-23	2022-08-24	2022-08-26	2022-09-01	2022-09-02	2022-09-05	2022-09-06	2022-09-07	2022-09-12		
	on of str		Grid #E3	Grid #F3	Grid #C3	Grid #C2	Grid #C3	Grid #C3	Grid #C3	Grid #C3	Grid #D1		
	ird Speci		Leach's Storm-Petrel	Black-Legged Kittwake	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Herring Gull		
Total # o	of Stranc	led Birds	1	1	1	1	1	1	1	1	1		
	#	Oiled	0	0	0	0	0	0	0	0	0		
Found Dead	Fate	# Disposed of at Sea	0	1	0	0	0	0	0	0	0		
				# Send Ashore	0	0	0	0	0	0	0	0	0
	Oiled	Oiled	Oiled	# Died in Care	0	0	0	0	0	0	0	0	0
Oiled				Oiled	Oiled	# Released Alive	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0		
Alive		# Died in Care	0	0	0	0	0	0	0	0	0		
	Not Oiled	# Released Alive	1	0	1	1	1	1	1	1	1		
		# Sent Ashore	0	0	0	0	0	0	0	0	0		
	Fog (y/n)	N	N	Υ	Υ	Υ	Υ	Υ	N	Υ		
-	Rain (y/n)	N	N	Υ	N	N	N	N	N	Υ		





On July 30, 2022, at 0430z, two Leach's Storm-Petrels were caught and released at 0700z during a systematic survey. See *Figure 13* and *Figure 14*.

The next day, on July 31, 2022, at 0300z, another Leach's Storm-Petrel was caught and placed in a box to rest before being released at 0700z. See *Figure 15*.

On August 05, 2022, at 1615z, a Leach's Storm-Petrel was found wet and showed signs of head trauma (missing feathers on crown). It was then placed in a recovery box and released at dawn. See *Figure 16*.

Two Leach's Storm-Petrels were found the following day, August 06, 2022, at 0745z. One was found hopping across the walkway in good condition. It was photographed and released immediately. The second Leach's Storm-Petrel was in the moonpool (below C2). It was placed in a recovery box and released according to protocol after several hours. See *Figure 17* and *Figure 18*.

On August 10, 2022, at 0830z, a Leach's Storm-Petrel was found on the walkway. It was carried to an area out of the wind for release. Successfully released port of the forward lifeboat station. Additionally, a Northern Gannet carcass was located and appeared to have died from a broken neck. Based on location, it likely flew into the starboard-forward anchor winch house.

A Leach's Storm-Petrel was found the following day, August 11, 2022, at 1400z. The carcass was sent to CWS. See *Figure 19*.

During an opportunistic survey on August 16, 2022, at 0530z, seven Leach's Storm-Petrels were found in the lower moonpool. Six were released, while one was found dead and sent to CWS.

The next day, on August 17, 2022, at 1105z, two Leach's Storm-Petrels were found in the lower moonpool, in an area with oil and grease present. Both birds were oiled. One was released, and the other died in care, with the carcass being sent to CWS.

On August 18, 2022, at 0715z, a Leach's Storm-Petrel was found in good condition. However, it refused to take off. Therefore, the bird was held for rest before being released.

During two stranded bird searches, on August 19, 2022, at 0715z and 1155z. Three Leach's Storm-Petrels were found in good condition and released.

On August 22, 2022, three opportunistic surveys were conducted at 0025z, 0545z, and 1730z. One Leach's Storm-Petrel was found during each of the three surveys. All three Leach's Storm-Petrels had wet feathers and were kept overnight to dry and rest before being released.

One Leach's Storm-Petrel was found on August 23, 2022, at 0200z. It was dry with lots of energy and carried to the side to be released immediately.

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On August 24, 2022, at 1920z, an immature Black-legged Kittiwake carcass with a broken wing was observed wedged between a lifeboat and a boarding ladder.

During an opportunistic survey on August 26, 2022, at 0900z, a Leach's Storm-Petrel was found by a crew member in the moonpool, placed in a recovery box to dry out, and was released at 1545z in good condition. See *Figure 20*.

On September 01, 2022, at 0530z, one Leach's Storm-Petrel was found in the moonpool and placed in a box to rest until release at 0730z. See *Figure 21*.

The next day, on September 02, 2022, at 0545z, another Leach's Storm-Petrel was found during an opportunistic survey. The bird was in the moonpool and placed in a recovery box until its release at 0730z. See *Figure 22*.

On September 05, 2022, at 0745z, one Leach's Storm-Petrels was found alive and placed in a recovery box before being released at 1100z.

One Leach's Storm-Petrel was found in good condition in the moonpool on the following day, August 06, 2022, at 1340z. The bird was immediately released.

On September 07, 2022, at 0750z, one Leach's Storm-Petrel was found in good condition in the moonpool and released immediately.

On September 12, 2022, at 1240z, one Juvenile, Herring Gull, could not take off due to obstructions. However, the bird was captured and released in good condition.

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Figure 13: Leach's Storm-Petrel – July 30, 2022



Figure 14: Leach's Storm-Petrel – July 30, 2022







Figure 15: Leach's Storm-Petrel – July 31, 2022



Figure 16: Leach's Storm-Petrel – August 05, 2022







Figure 17: Leach's Storm-Petrel – August 06, 2022



Figure 18: Leach's Storm-Petrel – August 06, 2022







Figure 19: Leach's Storm-Petrel – August 11, 2022



Figure 20: Leach's Storm-Petrel – August 26, 2022







Figure 21: Leach's Storm-Petrel – September 01, 2022



Figure 22: Leach's Storm-Petrel – September 02, 2022

Figure 23 identifies the total time the MMSO spent searching during their stationary stranded seabird search. The longest stranded seabird search lasted 60 minutes on August 16, 2022. There are no search

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times on August 24 and 25 and September 06 and 12, 2022, in *Figure 23* due to the stranding having been reported by other staff onboard the MODU. The MMSO would then report the strandings in the database and on an complete a survey sheet. On September 11, 2022, a search was not conducted due to high wind and waves.

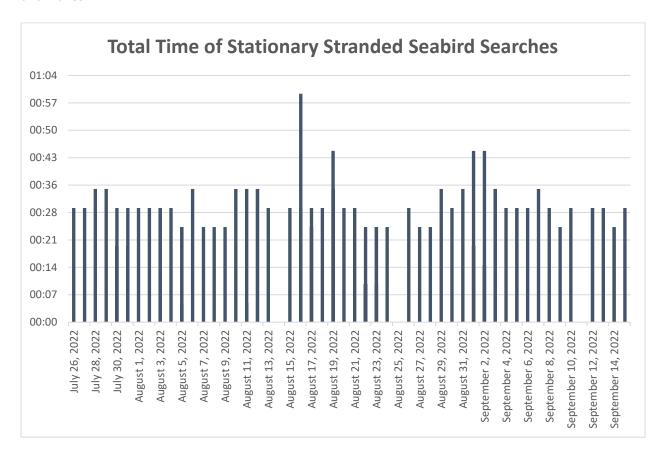


Figure 23: Total Time of Stationary Stranded Seabird Searches

Figure 24 below identifies the total area covered for the stationary stranded seabird searches based on the outline in Figure 6. Of the 68 stationary stranded bird surveys, 49 (72.1%) covered the entire 750m path. There were instances where sections could not be reached due to operations in those areas, unsafe weather conditions, or opportunistic searches.





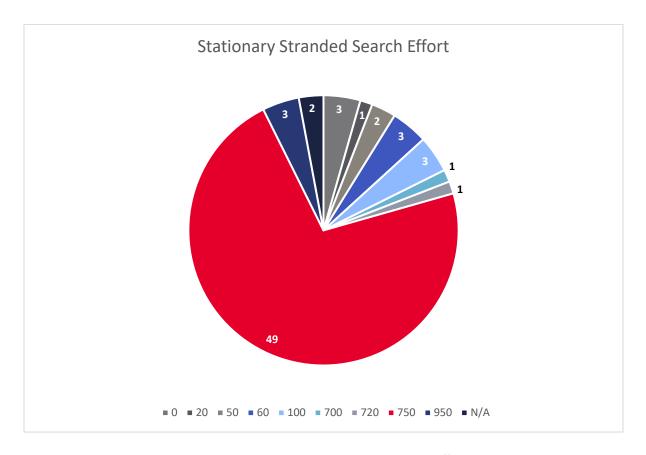


Figure 24: Stationary Stranded Search Effort

3.2.3 Stranded Seabird Searches In Transit to Sitka O-02A

Throughout the time that the West Hercules was in transit from the Sitka O-02 wellsite to the Sitka O-02A wellsite from September 15, 2022, at 1405z until September 16, 2022, at 2205z, there were two stranded seabird searches. Both searches had no seabirds found. Although, it is to be noted that on September 16, 2022, the stranded seabird survey completed from 0800z until 0825z did not cover grid search areas D3 and D4 due to safety barriers in place. *Table 11* outlines the number and the results of the searches.

Table 11: Seabird Strandings in Transit to the Sitka O-02A Well Site

Total Stranded Seabird Searches	No Seabirds Present	One Seabird Present	Multiple Seabirds Present
2	2	0	0
	100%	0%	0%

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3.2.4 Stranded Seabird Searches for Sitka O-02A

Throughout the time that the West Hercules was in operation on the Sitka O-02A well site, there were a total of 120 stranded seabird searches. 37 (30.8% of all searches) had no seabirds found. 39 (32.5% of all searches) had one seabird present. Finally, 44 (36.7% of all searches) identified more than one seabird during the search. *Table 12* outlines the number and the results of the searches.

Table 12: Seabird Strandings for the Sitka O-02A Well Site

Total Stranded Seabird Searches	No Seabirds Present	One Seabird Present	Multiple Seabirds Present
120	37	39	44
	30.8%	32.5%	36.7%

The Leach's Storm-Petrel was the most commonly identified stranding, accounting for 238 (95.6%) of all identified birds found. Please see *Table 13 to Table 21* and *Figure 25: Leach's Storm-Petrel – September 17, 2022*

to Figure 45 for reference to all findings.

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Table 13: Seabird Strandings (1/9)

Dat	te (yyyy/mm/	dd)	2022-09-17	2022-09-17	2022-09-17	2022-09-18	2022-09-18	2022-09-19	2022-09-20	2022-09-21	2022-09-24
Location o	f stranding (La Name)	at/Long, or	Grid #A4	Grid #C3	Grid #D3	Grid #A4	Grid #B3, A2, A3, A4	Grid #C3	Grid #D2	Grid #C3	Grid #A4
	Bird Species		Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Wilson's Warbler	Leach's Storm-Petrel	Leach's Storm-Petrel
Total	Total # of Stranded Birds		1	1	1	2	5	2	1	1	1
	#0	iled	0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	0	0	0	1	0	0
		# Send Ashore	0	0	0	0	0	0	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	0
	# Not Oiled Released Alive		1	1	1	2	5	2	0	1	1
# Sent Ashore		0	0	0	0	0	0	0	0	0	
	Fog (y/n)		N	N	N	N	N	N	N	N	Υ
	Rain (y/n)		Υ	Υ	N	N	Υ	Υ	N	N	N





Table 14: Seabird Strandings (2/9)

Dat	e (yyyy/mm/	dd)	2022-09-24	2022-09-25	2022-09-26	2022-09-26	2022-09-26	2022-09-26	2022-09-27	2022-09-27	2022-09-27
Location of	Location of stranding (Lat/Long, or Name)		Grid #A3	Grid #A1, A3	Grid #C1	Grid #E1	Grid #C3 Moonpool	Grid #D5, A4, D3	Grid #C5, B3	Grid #E3, A5, A3, A4	Grid #C4, C5, B5, E3
	Bird Species		Leach's Storm-Petrel								
Total	# of Stranded	Birds	1	2	2	1	1	6	5	6	7
	# C	iled	0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	1	0	0	0	0	0
Deud	rate	# Send Ashore	0	0	0	0	1	0	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	0
	Not Oiled # Released Alive		1	2	2	0	0	6	5	6	7
	# Sent Ashore		0	0	0	0	0	0	0	0	0
	Fog (y/n)		Υ	Υ	N	N	N	N	N	N	N
	Rain (y/n)		N	Υ	N	N	N	N	N	N	N





Table 15: Seabird Strandings (3/9)

Dat	e (yyyy/mm/	dd)	2022-09-27	2022-09-27	2022-09-28	2022-09-28	2022-09-28	2022-09-28	2022-09-28	2022-09-28	2022-09-29
Location of	f stranding (La Name)	at/Long, or	Grid #A5, F5	Grid #A5	Grid # E1, C3, C4, D3, ND2	Grid #C1, E4	Grid #E1, C5	Grid #A5, A3	Grid #C4 (Drill Floor)	Grid #C1	Grid #A3
	Bird Species		Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel
Total # of Stranded Birds		Birds	2	1	5	2	2	2	1	1	1
	# O	iled	0	0	0	0	0	0	0	0	0
Found Dead	Disposed		0	0	0	0	0	0	0	0	0
		# Send Ashore	0	0	0	0	0	0	0	0	0
	#1	# Died in Care	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	1	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	0
	# Not Oiled Released Alive		2	1	5	2	2	2	0	1	1
# Sent Ashore		0	0	0	0	0	0	0	0	0	
	Fog (y/n)		N	Υ	Υ	N	N	Υ	Υ	Υ	Υ
	Rain (y/n)		N	N	N	N	N	N	N	N	N





Table 16: Seabird Strandings (4/9)

Dat	te (yyyy/mm/	dd)	2022-09-29	2022-09-29	2022-09-30	2022-09-30	2022-09-30	2022-09-30	2022-10-01	2022-10-01	2022-10-02
Location o	f stranding (La Name)	at/Long, or	Grid #E3	Grid #C1	Grid #D4	Grid #C3, A3	Grid #A3, D2	Grid #D2, D3	Grid #A2	Grid #D5, A5, A3	Grid #C1, A5, C4
	Bird Species		Leach's Storm-Petrel								
Total	# of Stranded	Birds	1	1	1	2	2	2	1	3	3
	# Oiled		0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	0	0	0	0	0	0
		# Send Ashore	0	0	0	0	0	0	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	0
Not Oiled Released Alive		Released	1	1	1	2	2	2	1	3	3
# Sent Ashore		0	0	0	0	0	0	0	0	0	
	Fog (y/n)		Υ	Υ	Υ	Υ	Υ	N	N	N	N
	Rain (y/n)		N	N	Υ	Υ	Υ	N	N	N	N





Table 17: Seabird Strandings (5/9)

Dat	e (yyyy/mm/	dd)	2022-10-02	2022-10-02	2022-10-02	2022-10-03	2022-10-04	2022-10-04	2022-10-07	2022-10-07	2022-10-07
Location of	f stranding (La Name)	at/Long, or	Grid #C3 Moonpool	Grid #A4, A3, B3	Grid #A3, B1, D2	Grid #C3	Grid #D2	Grid #C4 (Drill Floor)	Grid #3C	N/A	Grid #3C
	Bird Species		Leach's Storm-Petrel	Leach's Storm- Petrel/Common Yellowthroat	Leach's Storm-Petrel	Leach's Storm-Petrel	American Redstart	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Dovekie
Total # of Stranded Birds		Birds	1	3	3	2	1	1	1	1	1
	# O	iled	0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	1	0	0	0	0	0	0	1
		# Send Ashore	0	0	0	0	0	1	0	0	0
		# Died in Care	1	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	1	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	1	0	0	0	0
Not Oiled Released Alive		0	2	3	2	0	0	0	1	0	
# Sent Ashore			0	0	0	0	0	0	0	0	0
	Fog (y/n)		N	N	N	N	N	N	N	N	N
	Rain (y/n)		N	Υ	N	N	N	N	N	N	N





Table 18: Seabird Strandings (6/9)

Da	te (yyyy/mm/	dd)	2022-10-07	2022-10-09	2022-10-10	2022-10-10	2022-10-11	2022-10-12	2022-10-12	2022-10-15	2022-10-16
Location o	f stranding (La Name)	at/Long, or	Grid #1E	Grid #5E, 3A, 4C	Grid #3C	Grid #3D	Grid #2C	Grid #C2	Grid #4A	Grid #2A	N/A
	Bird Species		Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Dovekie	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Peregrine Falcon
Total	Total # of Stranded Birds		2	5	1	2	1	1	1	1	1
	# O	iled	0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	0	1	0	0	0	0
		# Send Ashore	0	0	0	0	0	0	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	0
	Not Oiled Released Alive		2	5	1	2	0	1	1	1	0
	# Sent Ashore		0	0	0	0	0	0	0	0	1
	Fog (y/n)		N	Υ	Υ	Υ	N	N	N	Υ	Υ
	Rain (y/n)		N	N	N	N	N	N	N	N	N





Table 19: Seabird Strandings (7/9)

Da	te (yyyy/mm/	dd)	2022-10-16	2022-10-16	2022-10-16	2022-10-17	2022-10-17	2022-10-17	2022-10-18	2022-10-18	2022-10-19
Location o	f stranding (La Name)	at/Long, or	Grid #3A	Grid #4B	Grid #NC1	Grid #1D	Grid #2F	Grid #1E	Grid #D5, F3, D3, C4	Grid #D5	Grid #2F
Bird Species			Leach's Storm-Petrel	Leach's Storm-Petrel	Dark-Eyed Junco	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel	Leach's Storm-Petrel
Total # of Stranded Birds		1	1	1	2	3	1	4	1	1	
	#0	iled	0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	1	0	0	0	0	0	0
		# Send Ashore	0	0	0	0	0	0	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	0
	Not Oiled Released Alive		1	1	0	2	3	1	4	1	1
# Sent Ashore		0	0	0	0	0	0	0	0	0	
	Fog (y/n)		Υ	N	N	N	N	N	N	N	N
	Rain (y/n)		N	N	N	N	N	N	N	N	N





Table 20: Seabird Strandings (8/9)

Da	te (yyyy/mm/	dd)	2022-10-19	2022-10-19	2022-10-20	2022-10-20	2022-10-20	2022-10-21	2022-10-21	2022-10-21	2022-10-21	2022-10-22
Location o	of stranding (La Name)	at/Long, or	Grid #5F	Grid #C4, 2F	Grid #2E, 5D, 2B	Grid #4C, 2F	Grid #4A	Grid #4C	Grid #3D, 3F	Grid #5D	Grid #5A	Grid #2F, 2B, 3F, 5C, 4C
	Bird Species		Leach's Storm-Petrel									
Total # of Stranded Birds		3	3	3	2	1	2	2	1	1	8	
	# O	iled	0	0	0	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	0	0	0	0	0	0	0	0
		# Send Ashore	1	0	0	0	0	0	0	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	0	0	0	0	0	0	1	2
	Not Oiled	# Released Alive	2	3	3	2	1	2	2	1	0	6
		# Sent Ashore	0	0	0	0	0	0	0	0	0	0
	Fog (y/n)		N	N	N	N	N	N	N	N	N	Υ
	Rain (y/n)		N	N	N	N	N	N	N	Υ	Υ	N





Table 21: Seabird Strandings (9/9)

Dat	te (yyyy/mm/	dd)	2022-10-22	2022-10-22	2022-10-22	2022-10-23	2022-10-23	2022-10-23	2022-10-23	2022-10-24	2022-10-24	2022-10-24
Location of	f stranding (La Name)	at/Long, or	Grid #5E, 4B, N/A	Grid #2F, 3F, 5A, 2C, 2D, 3D, 4D, 5A	Grid #2C, 1E, 3B	Grid #3C, 3D, 4A, 3F, 1E	N/A	Grid #1E, 3F	Grid #3C	Grid #1E	Grid #3C	Grid #3A
Bird Species Total # of Stranded Birds			Leach's Storm- Petrel	Leach's Storm- Petrel, Pine Warbler	Leach's Storm- Petrel	Leach's Storm- Petrel	Leach's Storm- Petrel, Great Shearwater	Leach's Storm- Petrel, Snow Bunting	Leach's Storm- Petrel	Leach's Storm- Petrel	Leach's Storm- Petrel	Great Black- Backed Gull
Total	# of Stranded	Birds	34	10	9	18	16	2	5	2	5	1
	# 0	iled	0	0	0	0	0	0	0	0	0	0
Found Dead	Eato	# Disposed of at Sea	0	1	0	0	0	0	0	0	0	0
	Dead Fate	# Send Ashore	0	0	0	0	0	0	2	0	0	0
		# Died in Care	0	0	0	0	0	0	0	0	0	0
	Oiled	# Released Alive	0	0	0	1	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0	0	0	0
Alive		# Died in Care	0	0	1	0	0	1	0	0	0	0
	Not Oiled #		34	9	8	17	16	1	3	2	5	1
	# Sent Ashore		0	0	0	0	0	0	0	0	0	0
	Fog (y/n)		N	Υ	N	N	N	N	N	N	N	N
	Rain (y/n)		N	N	N	N	N	N	N	N	N	N





On September 17, 2022, one stranded bird search and two opportunistic surveys were conducted with reported strandings. One was at 0915z, another at 1100z, and the last was at 2205z. Each search found one Leach's Storm-Petrel, totalling three stranded birds being found this day. Two birds were found in good condition at 0915z and 2205z. At 1100z, a Leach's Storm-Petrel was reported on the drill floor and covered in mud. CWS was contacted, and the bird was placed in a recovery box and later released alive. See *Figure 25* and *Figure 26*.

Two opportunistic surveys were conducted on September 18, 2022, at 0435z and 2320z. One bird was found in the vicinity of the aft knuckle crane on the third level, four were found along the aft deck, and two were in the vicinity of an ROV container. All were in excellent condition and successfully released.

On September 19, 2022, at 0205z, two Leach's Storm-Petrels were found in good condition and successfully released. One bird was located near the moonpool area, while the other was located on the drill floor.

One Wilson's Warbler was reported dead on September 20, 2022, at 1230z. The bird was found dead in the search area, photographed for identification then disposed of at sea. See *Figure 27*.

On September 21, 2022, at 0635z, one Leach's Storm-Petrel was found in good condition at the crown on the top of the derrick and was successfully released from the main deck.

Two Leach's Storm-Petrels were found during the daily stranded bird search and opportunistic survey on September 24, 2022. One was found at 1935z near the ROV shack in good condition, and the other bird was found at 2200z in good condition in the vicinity of the aft lifeboat station. Both were kept to rest and released near dawn. See *Figure 28* and *Figure 29*.

Two Leach's Storm-Petrels were discovered during the daily stranded bird search at 0645z on September 25, 2022. One bird was found in good condition along the aft port deck and released immediately. The other bird was found just aft of the entrance of the moonpool on the port side. It was successfully released at dusk. See *Figure 30* and *Figure 31* for images.

Ten Leach's Storm-Petrels were discovered on September 26, 2022. Two were found at 0720z in good condition in the vicinity of the base of the port crane. They were successfully released. One was found at 1400z in a high state of decomposition and was disposed of at sea after contacting CWS. At 1745z, one bird was found in a water-filled catch-all in the moonpool. It was then placed in a cooler for transport to CWS when possible. At 2300z, one Leach's Storm-Petrel was found at the starboard bunker station, four were in the vicinity of the ROV shack, and one was on the main deck near the entrance to the change room. All were in good condition and released immediately. See *Figure 32* and *Figure 33*.

Twenty-One Leach's Storm-Petrels were found on the following day, September 27, 2022. At 0030z, two of the birds were found near the base of the starboard; another two were located on the second level near the knuckle crane pedestal, and one other bird was found on the stairway to the bottle deck. All five

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birds were found in good condition and released immediately. At 0355z, a total of six Leach's Storm-Petrels were found. One bird was found in the corridor just aft of the forward lifeboat station adjacent to the riser bay. Another single bird was located next to the starboard aft anchor winch, and another lone bird was found in the vicinity of aft lifeboats. These three birds were all found in good condition and released immediately. The other three were in good condition and found in the vicinity of the ROV shack. One was released, while the other two were kept dry and released before dawn. At 0505z, seven birds were found and released in good condition. At 0730z, two were found in good condition and released immediately. During the last opportunistic survey of the day at 1745z, one Leach's Storm-Petrel was found by a crew member at the starboard aft in good condition. It was placed in a recovery box until dusk due to the presence of a Greater Black-backed Gull on the water. See *Figure 34*.

On September 28, 2022, thirteen Leach's Storm-Petrels were found in various areas around the rig at different times of the day. Five were found at 0030z; four were in good condition and were released immediately, while one was wet and placed in recovery before its release at dawn. Two were located at 0200z in good condition and were released. At 0400z, an additional two were found and released in good condition. Two were found in good condition at 1250z and were not released until after dark due to predatory birds in the area. One Leach's Storm-Petrel was reported at 1700z. Some oil grease was on the feathers, and CWS was notified. The bird was kept in a recovery box for 14 hours and attempted release. The last Leach's Storm-Petrel was found at 2130z in good condition and released. See *Figure 35*, *Figure 36*, and *Figure 37*.

Three Leach's Storm-Petrels were found on September 29, 2022, at 0030z, 0435z, and 0845z. Two were found in good condition and released. One was wet, placed in recovery and was to be released in the evening.

At the times of 0030z, 0430z, 2225z, and 2310z on September 30, 2022, seven Leach's Storm-Petrels were discovered. Five birds were caught and released immediately, while two were wet and placed in a box to dry before they were released before dawn. See *Figure 38*.

On October 01, 2022, a stranded bird search occurred at 0915z, which resulted in one Leach's Storm-Petrel being found, placed in a recovery box, photographed, and released at dusk. During the opportunistic survey at 2245z, three Leach's Storm-Petrels were found and released immediately once they were deemed in good condition. See *Figure 39*.

While conducting the daily stranded bird search at 0630z on October 02, 2022, three Leach's Storm-Petrels were found and released immediately. At 1040z, one Leach's Storm-Petrel was found covered in sludge grease. CWS was contacted. The bird died in care and was sent to CWS. At 1635z, two Leach's Storm-Petrels were found, one being released at dusk and one after dark. A common Yellowthroat was also discovered deceased and was disposed of at sea. At 2255z, three more Leach's Storm-Petrels were caught and immediately released. See *Figure 40* and *Figure 41*.

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During an opportunistic survey on October 03, 2022, at 0820z, two Leach's Storm-Petrels were reported in the moonpool area outside the workshop. Another was found at the top of stairs leading down to the moonpool. Both were kept to dry and released at dusk. See *Figure 42*.

On October 04, 2022, at 0500z, a female American Redstart was found stunned. It was placed in a recovery box to rest, died in care, and was disposed of at sea. At 0900z, one Leach's Storm-Petrel was reported by the drill floor. A few minutes later, the bird was found dead, drenched in water. CWS was contacted for pick up.

Throughout the day on October 07, 2022, four Leach's Storm-Petrels were discovered during stranded bird surveys and one Dovekie. One Leach's Storm-Petrel was found at 0200z. The bird was oiled on the drill floor, able to fly, and was later released after being placed in a recovery box. Another Leach's Storm-Petrel was discovered at 0700z. Finally, a Dovekie was found at 1500z in the moonpool area directly below the Peregrine roosting site. The bird had been predated, with part of the head missing. The last two Leach's Storm-Petrels were found in good condition by the deck crew tucked under a girder. They were kept in a recovery box until dark due to predators in the vicinity (an immature peregrine falcon was sitting on the helideck). See *Figure 43*.

On October 09, 2022, at 2200z, five Leach's Storm-Petrels were discovered and released alive. There was evidence of a predation event.

The next day, October 10, 2022, one Leach's Storm-Petrel was discovered during the 0940z survey, and two others were discovered at 2300z. All were released after dark.

The following day on October 11, 2022, at 0940z, a Dovekie was found dead with its wing detached and found in the moonpool area. There were signs of it being predated. The carcass was disposed of on-site.

Four Leach's Storm-Petrels were discovered on October 12, 2022. However, two of the four Leach's Storm-Petrels were not counted as strandings as they were fresh predation events with feathers. The carcasses were disposed of on-site. One bird was discovered at 0520z and released. The other Leach's Storm-Petrel was found in good condition at 0940z and was placed in a recovery box for release at night.

One Leach's Storm-Petrel was found and released on October 15, 2022, at 0630z.

On October 16, 2022, at 0200z, one Peregrine Falcon was discovered and sent to shore alive to CWS. Two Leach's Storm-Petrels were found at 0500z and 0700z and were released. At 1050z, a male Dark-eyed Junco was found dead under the stairway to the helideck. The carcass was disposed of at the site. See *Figure 44*.

Six Leach's Storm-Petrels were discovered throughout the day on October 17, 2022, during three separate surveys at 0230z, 0530z, and 0940z. All were released alive; one was released after dark.

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Two stranded surveys were conducted on October 18, 2022, at 0030z and 0730z, with five reported Leach's Storm-Petrels. All were released alive.

On October 19, 2022, three surveys were conducted with reported strandings at 0100z, 0730z, and 2250z. Seven Leach's Storm-Petrels were found; six were released, one was found dead, and its carcass was sent to CWS.

The following day, October 20, 2022, six Leach's Storm-Petrels were discovered. Five were released, and one was placed in a recovery box to dry out before it was released in good condition. Surveys were conducted at 0215z, 0700z, and 0905z.

Four surveys were conducted on October 21, 2022, at 0130z, 0530z, 0900z, and 1430z. Altogether, six Leach's Storm-Petrels were found. Five were released in good condition. One bird was found alive by a crew member floating in rainwater but died shortly after recovery.

On October 22, 2022, at 0000z, six Leach's Storm-Petrels were released in good condition, and two were placed in individual boxes to monitor due to being covered in heavy mud. Both died in care. At 0130z, 34 Leach's Storm-Petrel were found and released in good condition. There were signs of predation. At 0855z, three Leach's Storm-Petrels were released in good condition, and six were found in the moonpool, wet and placed in recovery. One male Pine Warbler was found dead. At 2300z, nine Leach's Storm-Petrels were discovered; some were found wet or covered in mud. Eight were released, and one died in care; its carcass was sent to CWS.

The next day, October 23, 2022, four surveys were conducted at 0230z, 0500z, 0855z, and 1520z. During these times, 39 Leach's Storm-Petrels were found, one Great Shearwater and one Snow Bunting. Thirty-six Leach's Storm-Petrels were released, two were found dead close to the edge of the moonpool, and one was found on the drill floor by a crew member, contaminated with cable greases on the belly and tail. Carcasses were sent to CWS. The Great Shearwater was released alive. The Snow Bunting was found sleeping and died in a recovery box, and the carcass was disposed of at sea. See *Figure 45*.

Three surveys were conducted on October 24, 2022, at 0200z, 0900z, and 1440z. Seven Leach's Storm-Petrels were discovered; most were released in good condition. One was placed in a recovery box to dry out. In addition, the ROV crew reported an adult Great Black-backed Gull inside the ROV hanger. The bird was captured and released in good condition.

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Figure 25: Leach's Storm-Petrel – September 17, 2022



Figure 26: Leach's Storm-Petrel – September 17, 2022

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Figure 27: Wilson's Warbler – September 20, 2022



Figure 28: Leach's Storm-Petrel – September 24, 2022







Figure 29: Leach's Storm-Petrel – September 24, 2022



Figure 30: Leach's Storm-Petrel – September 25, 2022







Figure 31: Leach's Storm-Petrel – September 25, 2022



Figure 32: Leach's Storm-Petrel – September 26, 2022

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Figure 33: Leach's Storm-Petrel – September 26, 2022



Figure 34: Leach's Storm-Petrel – September 27, 2022







Figure 35: Leach's Storm-Petrel – September 28, 2022



Figure 36: Leach's Storm-Petrel – September 28, 2022







Figure 37: Leach's Storm-Petrel – September 28, 2022



Figure 38: Leach's Storm-Petrel – September 30, 2022







Figure 39: Leach's Storm-Petrel – October 01, 2022

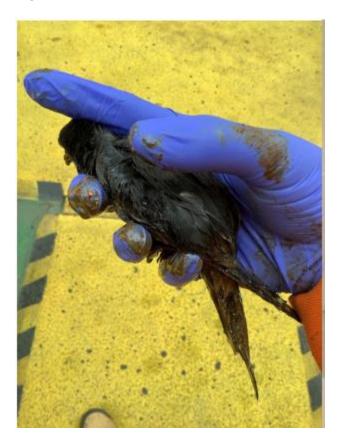


Figure 40: Leach's Storm-Petrel – October 02, 2022







Figure 41: Leach's Storm-Petrel – October 02, 2022



Figure 42: Leach's Storm-Petrel – October 03, 2022







Figure 43: Leach's Storm-Petrel – October 07, 2022



Figure 44: Peregrine Falcon – October 16, 2022







Figure 45: Snow Bunting - October 23, 2022

Figure 46 identifies the total time the MMSO spent searching during their stranded seabird search. The longest stranded seabird search lasted 150 minutes on October 22, 2022. The shortest search lasted 0 minutes on October 07, 21, 23, and 24, 2022, due to the stranding having been reported by other staff onboard the MODU. The MMSO would then report the strandings in the database and on a survey sheet.

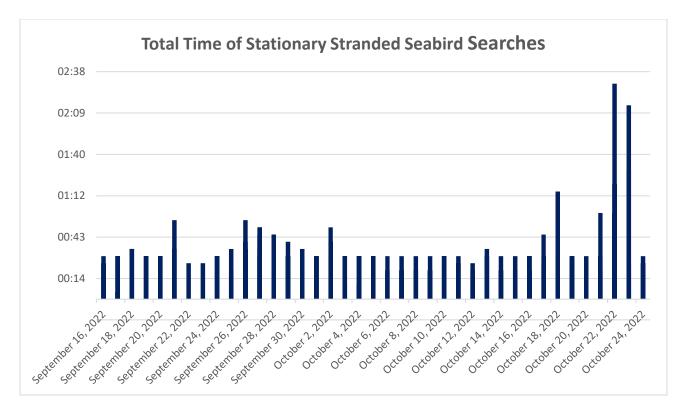


Figure 46: Total Time of Stationary Stranded Seabird Searches

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Figure 47 below identifies the total area covered for the stationary stranded seabird searches based on the outline in Figure 6. Of the 120 stationary stranded bird surveys, 50 (41.7%) covered the entire 750m path, and 29 (24.2%) covered a path greater than 750m. There were instances where sections could not be reached due to operations in those areas and opportunistic searches.

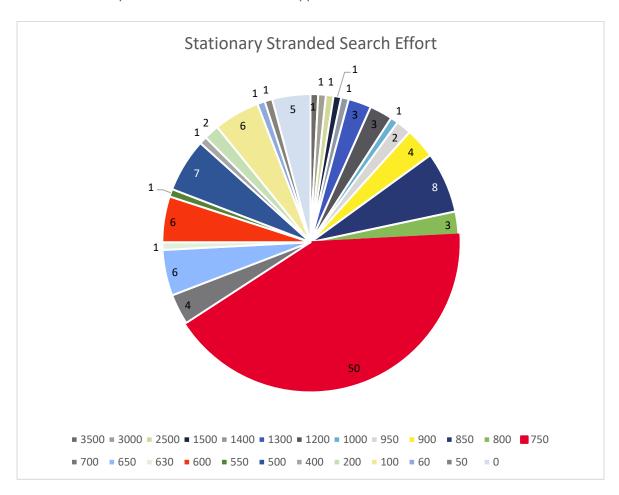


Figure 47: Stationary Stranded Search Effort

3.2.5 Stranded Seabird Searches In Transit to Sitka 0-02

The movement from Sitka O-02A to Sitka O-02 occurred at night, from October 25, 2022, from 0015z to 0145z; therefore, no stranded seabird searches were performed.

3.2.6 Stranded Seabird Searches for Sitka O-02

Throughout the time that the West Hercules was in operation on the Sitka O-02 well site, there were a total of 21 stranded seabird searches. 17 (81.0% of all searches) had no seabirds found. 2 (9.5% of all searches) had one seabird present. Finally, 2 (9.5% of all searches) identified more than one seabird during the search. Table 22 outlines the number and the results of the searches.

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Table 22: Seabird Strandings while at the Sitka O-02 Well Site

Total Stranded Seabird Searches	No Seabirds Present	One Seabird Present	Multiple Seabirds Present
21	17	2	2
	81.0%	9.5%	9.5%

The Great Black-Backed Gull was the most commonly identified stranding, accounting for 2 (33.3%) of all identified birds found. Please see *Table 23, Figure 48*, and *Figure 49* for reference to all findings.







Table 23: Seabird Strandings

D	ate (yyyy/mm/do	d)	2022-10-26	2022-10-27	2022-10-27	2022-10-29
	tranding (Lat/Lor		Grid #A4, D5	Grid #D2, F3	Grid #B5	Grid #NC1
	Bird Species	<u> </u>	Great Black- Backed Gull, Snow Bunting	Leach's Storm-Petrel, Great Shearwater	Great Black- Backed Gull	White- Rumped Sandpiper
Tota	al # of Stranded B	irds	2	2	1	1
	# O	iled	0	0	0	0
Found Dead	Foto	# Disposed of at Sea	1	0	0	1
	Fate # Send Ashore		0	0	0	0
		# Died in Care	0	0	0	0
	Oiled	# Released Alive	0	0	0	0
Captured		# Sent Ashore	0	0	0	0
Alive		# Died in Care	0	0	0	0
	Not Oiled	# Released Alive	1	2	1	0
	# Sent Ashore			0	0	0
	Fog (y/n)			N	Y	N
	Rain (y/n)		N	N	N	Υ





On October 26, 2022, at 1830z, one Great Black-Backed Gull was reported near the ROV shack. The bird appeared to be disoriented but physically unhurt. The gull was later released. A Snow Bunting was also found decapitated. The body was disposed of at sea. See *Figure 48*.

The following day, October 27, 2022, at 0110z, one Leach's Storm-Petrel was found stranded outside the entrance to the change room. On the search, one Great-Shearwater was located near the forward lifeboats. Both birds were immediately released.

Later that day, on October 27, 2022, at 1900z, one adult Great Black-Backed Gull was reported near the sack store. The gull appeared to have overeaten and was reluctant to fly. The bird was captured with a net and released to avoid an operational hazard. The gull flew to the surface of the water with ease.

The next stranding was reported on October 29, 2022, at 0950z. A deceased White-Rumped Sandpiper was located on the navigation deck of the vessel. The body was disposed of and pictured in *Figure 49*.



Figure 48: Snow Bunting – October 26, 2022

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Figure 49: White-Rumped Sandpiper – October 29, 2022

Figure 50 identifies the total time the MMSO spent searching during their stranded seabird search. The longest stranded seabird search lasted 40 minutes on October 27, 2022. The shortest search lasted 0 minutes on October 29 2022, due to the stranding having been reported by other staff onboard the MODU. The MMSO would then report the strandings in the database and on a survey sheet.





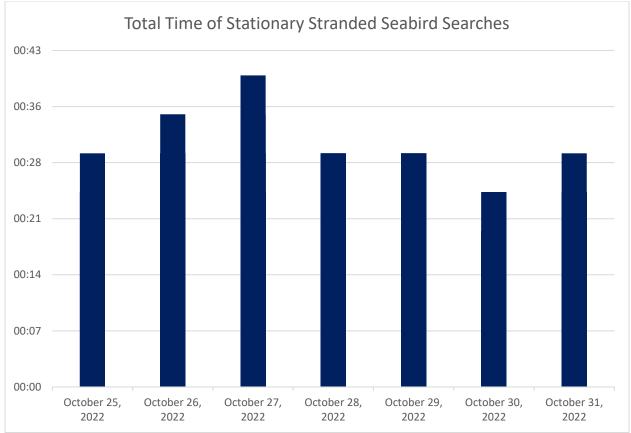


Figure 50: Total Time of Stationary Stranded Seabird Searches

Figure 51 below identifies the total area covered for the stationary stranded seabird searches based on the outline in Figure 6. Of the 21 stationary stranded bird surveys, 9 (42.9%) covered the entire 750m path, and 2 (9.5%) covered a path greater than 750m. In addition, there were instances where sections were not searched due to specific opportunistic searches.





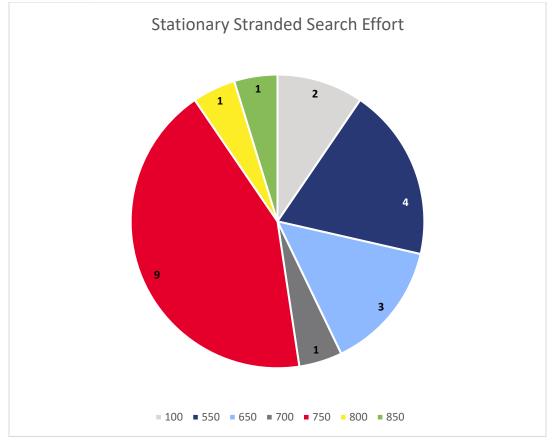


Figure 51: Stationary Stranded Search Effort





3.2.7 Stranded Seabird Searches for Sitka O-02 in Transit to Bay Bulls

Throughout the time that the West Hercules was in transit from the Sitka O-02 wellsite back to Bay Bulls from October 31, 2022, at 2100z to November 04, 2022, at 0630z, there were a total of 11 stranded seabird searches conducted and 13 birds found. 4 (40.0% of all searches) had no seabirds found. Additionally, 4 (30.0% of all searches) had one seabird present. Finally, 3 (30.0% of all searches) identified more than one seabird during the search. *Table 24* outlines the number and the results of the searches.

Table 24: Seabird Strandings while in Transit from the Sitka O-02 Well Site to Bay Bulls

Total Stranded Seabird Searches	No Seabirds Present	One Seabird Present	Multiple Seabirds Present	
11	4	4	3	
	36.4%	36.4%	27.2%	

The Leach's Storm-Petrel was the most commonly identified stranding, accounting for 10 (76.9%) of all identified birds found. Please see *Table 25* as well as *Figure 52* and *Figure 53* for reference to all findings.

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Table 25: Seabird Strandings

Date	Date (yyyy/mm/dd)		2022-10-31	2022-11-01	2022-11-01	2022-11-02	2022-11-02	2022-11-02	2022-11-03
Location of stranding (Lat/Long, or Name)		Grid #F3	Grid #NC2	Grid #C2	Grid #C3, B1	Grid # C3	Grid #A4	Grid #E1, D2, B1, A2	
Bird Species		Great Black- Backed Gull	Great Black- Backed Gull	Unknown Passerine	Leach's Storm- Petrel	Leach's Storm- Petrel	Leach's Storm- Petrel	Leach's Storm- Petrel	
Total #	of Stranded	Birds	1	1	1	2	2	1	5
	# Oi	iled	0	0	0	0	0	0	0
Found Dead	Fate	# Disposed of at Sea	0	0	1	0	0	0	0
		# Send Ashore	0	0	0	0	1	0	0
	Oiled	# Died in Care	0	0	0	1	0	0	0
		# Released Alive	0	0	0	0	0	0	0
Captured		# Sent Ashore	0	0	0	0	0	0	0
Alive	Not Oiled	# Died in Care	0	0	0	0	0	0	0
		# Released Alive	1	1	0	1	1	1	5
		# Sent Ashore	0	0	0	0	0	0	0
	Fog (y/n)		N	N	N	N	N	N	N
	Rain (y/n)		N	N	N	N	N	Υ	N





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On October 31, 2022, at 2325z, one adult Great Black-Backed Gull was found near the forward lifeboats. After several attempts to determine the gull's condition, it took off on its own accord when it was in a clear area on the starboard forward.

The next day on November 01, 2022, at 1120z, a juvenile Great Black-Backed Gull was located on the helideck before helicopter operations. The bird was released and flew away strongly.

Later that day, on November 01, 2022, at 1840z, an unknown Passerine was found decomposed near the shakers on the Upper Deck. The body was photographed and disposed of. See *Figure 52*.

On November 02, 2022, at 1120z, two Leach's Storm-Petrels were discovered. One of the birds was found in the moonpool and placed in a recovery box. The bird's feathers were covered in contaminated liquid and thus treated as if oiled. CWS was contacted for pickup. The other Leach's Storm-Petrel was located port aft of the vessel near the pipe deck. This bird was photographed and then released. See *Figure 52*.

Later that day, on November 02, 2022, at 1230z, another two Leach's Storm-Petrels were found stranded in the moonpool. CWS was contacted for pickup for one of the birds. The other Storm-Petrel was kept in a recovery box overnight as it was not suitable for flight when discovered.

On the evening of November 02, 2022, at 1750z, one Leach's Storm-Petrel was found near an ROV container. The bird was placed into a recovery box and released at dawn.

On November 03, 2022, at 0425z, five Leach's Storm Petrels were found stranded. One of the birds was found on the third deck on the stairs outside of the heli-admin office. The bird was placed in a box before being released at dawn. Another Leach's Storm-Petrel was found on the main deck just outside to port of the change shack and was successfully released. Another two birds were found on the main deck, port aft. One of the Leach's Storm-Petrels was released, and the other was placed in a box for release at dawn. The last bird was located on the main deck near the entrance to the lifeboat area. It was also placed in a box for release at dawn.

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Figure 52: Unknown Passerine – November 01, 2022



Figure 53: Leach's Storm-Petrel – November 02, 2022





Figure 54 identifies the total time the MMSO spent searching during their stranded seabird search. The longest stranded seabird search lasted 40 minutes on November 03, 2022. The shortest search lasted 2 minutes on November 01 2022, due to the stranding having been reported by other staff onboard the MODU. The MMSO would then report the strandings in the database and on an opportunistic survey sheet.

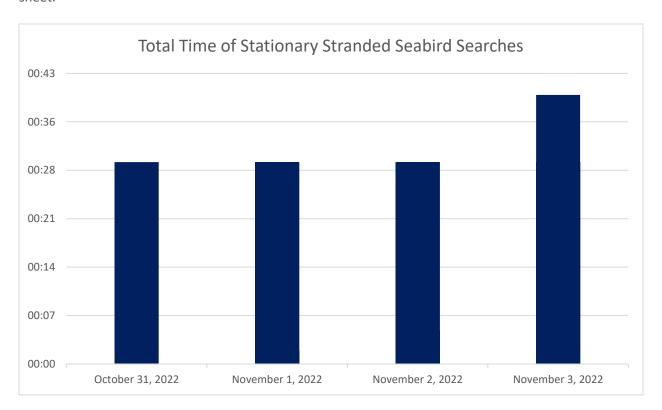


Figure 54: Total Time of Stationary Stranded Seabird Searches

Figure 55 below identifies the total area covered for the stationary stranded seabird searches based on the outline in Figure 6. Of the 11 stationary stranded bird surveys, 4 (36.4%) covered the entire 750m path, and 1 (9.1%) covered a path greater than 750m. There were instances where sections were not searched due to specific opportunistic searches.





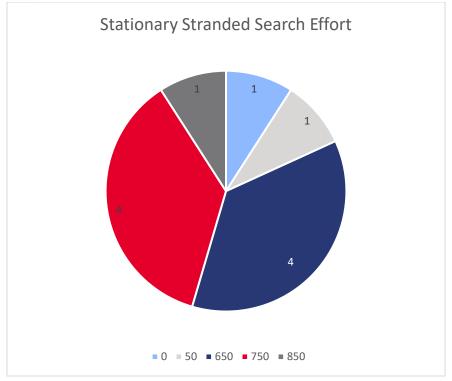


Figure 55: Stationary Stranded Search Effort

3.3 Marine Mammal and Sea Turtle Monitoring

3.3.1 Marine Mammal and Sea Turtle Monitoring in Transit to Sitka O-02

There were no marine mammal sightings in transit to the Sitka O-02 wellsite from the Cambriol G-92 wellsite.

3.3.2 Marine Mammal and Sea Turtle Monitoring for Sitka O-02

Table 26 and *Figure 56* outline all marine mammals identified, their activity and their distance to the facility from July 25, 2022, to September 15, 2022, on the Sitka O-02 wellsite.

Table 26: Marine Mammal Sightings for the Sitka O-02 Wellsite

Month	Day	Year	Time (UTC)	Species	Number	Activity	Distance (m)
07	30	2022	0730	Humpback Whale	1	First spotted 200m from the rig, stayed for several hours, then spotted	0

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						directly under rig and helideck	
08	02	2022	0830	Sperm Whale	1	Travelling west	800+
08	26	2022	1730	Sperm Whale	1	Logging and blowing	2000
08	28	2022	1430	Unidentified Dolphin	6	Circling/feeding around the rig	700
09	01	2022	1830	Atlantic White-Sided Dolphin	170	Travelling NE, a large number of mammals extending out 1km	300
09	03	2022	1630	Unidentified Dolphin	20	Travelling east, they appeared to be feeding	2000
09	05	2022	1330	Unidentified Dolphin	20	Travelling SW	2000
09	05	2022	1330	Unidentified Dolphin	30	Travelling NE	1000
09	05	2022	1330	Ocean Sunfish	1	Travelling west	300+
09	05	2022	1630	Sperm Whale	1	Logging and blowing, fluke observed during dive	2000
09	05	2022	1830	Sperm Whale	4	Logging and blowing	1000
09	05	2022	1830	Sperm Whale	6	Logging and blowing	2000
09	05	2022	1830	Sperm Whale	1	Logging and blowing	1500
09	05	2022	2150	Unidentified Dolphin	40	Travelling north, porpoising; possibly feeding	400
09	07	2022	1430	Unidentified Dolphin	10	Travelling south	700

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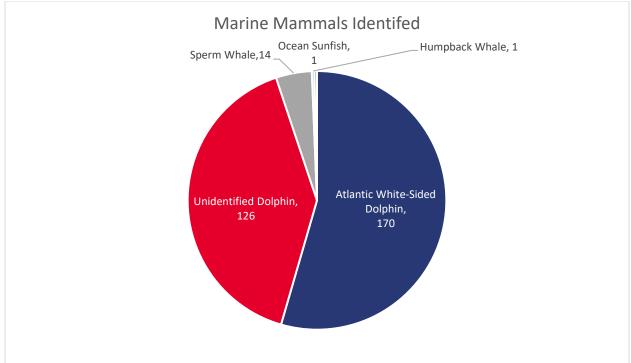


Figure 56: Marine Mammal Identified on Sitka O-02 Wellsite





3.3.3 Marine Mammal and Sea Turtle Monitoring in Transit to Sitka 0-02A

There were no marine mammal sightings in transit to the Sitka O-02A wellsite from the Sitka O-02 wellsite from September 15, 2022, at 1405z, to September 16, 2022, at 2205z.

3.3.4 Marine Mammal and Sea Turtle Monitoring for Sitka O-02A

Table 27 and *Figure 57* outline all marine mammals identified, their activity, and their distance to the facility, from September 16, 2022, to October 25, 2022, on the Sitka O-02A wellsite.

Table 27: Marine Mammal Sightings for the Sitka O-02A Wellsite

Month	Day	Year	Time (UTC)	Species	Number	Activity	Distance (m)
09	20	2022	1130	Long-finned Pilot Whale	15	15 individuals (including at least 2 juveniles) swimming to the west	1000
09	21	2022	1720	Fin Whale	1	It surfaced several times in successions on the starboard side. Long back, falcate dorsal fin, columnar spout.	500
09	26	2022	1730	Ocean Sunfish	1	Travelling west	0-50
09	28	2022	1123	Unidentified Dolphin	10	Porposing to the SE, then to the south. They are likely white-beaked dolphins. One juvenile observed	800-1000
09	29	2022	1625	Unidentified Dolphin	12	Porpoising. A small pod of Atlantic White-Sided Dolphins or Common Dolphins.	1500
10	01	2022	2041	Atlantic White-Sided Dolphin	15	Feeding, breaching within a localized area towards the NE and variable. At	500-700

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						least 2 juveniles present	
10	06	2022	0930	Atlantic White-Sided Dolphin	10	Travelling north	700
10	06	2022	1330	Unidentified Dolphin	30	Travelling south	1500
10	06	2022	1630	Unidentified Dolphin	30	Travelling south	2000
10	10	2022	1030	Unidentified Dolphin	20	Travelling west	1500
10	14	2022	1030	Unidentified Dolphin	20	Travelling north	1000
10	15	2022	1040	Unidentified Dolphin	50	Travelling north	500
10	19	2022	0940	Atlantic White-Sided Dolphin	30	Travelling SE	300
10	19	2022	0940	Atlantic White-Sided Dolphin	30	Travelling south	700

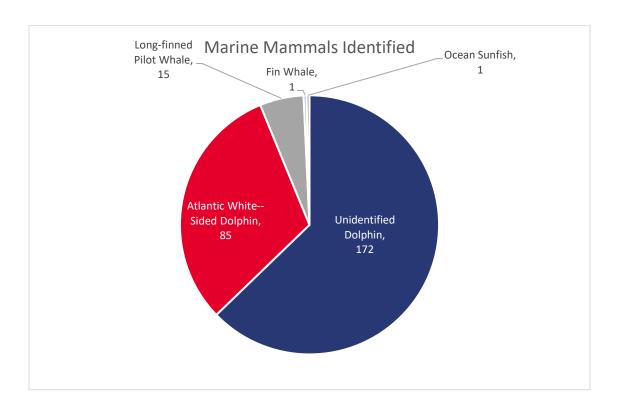


Figure 57: Marine Mammal Identified on Sitka O-02A Wellsite

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3.3.5 Marine Mammal and Sea Turtle Monitoring in Transit to Sitka O-02

There were no marine mammal sightings in transit to the Sitka O-02 wellsite from the Sitka O-02A wellsite from October 25, 2022, from 0015z to 0145z.

3.3.6 Marine Mammal and Sea Turtle Monitoring for Sitka O-02

There were no marine mammal sightings during the entirety of the West Hercules' time on the Sitka O-02 wellsite from October 25, 2022, at 0145z, to October 31, 2022, at 2100z.

3.3.7 Marine Mammal and Sea Turtle Monitoring for Sitka O-02 in Transit to Bay Bulls

There were no marine mammal sightings in transit to Bay Bulls from the Sitka O-02 wellsite from October 31, 2022, at 2100z, to November 04, 2022, at 0630z.

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4.0 Supplementary Digital Data

The following data has also been provided for this report:

- ECSAS Wildlife Survey spreadsheet (West Hercules 2022): Spreadsheet outlining all data recorded (July 25, 2022 November 04, 2022);
- Daily Seabird Observation Report: Forms identifying the number of seabirds recorded daily during the Sitka O-02 and Sitka O-02A projects.
- Weekly Seabird Observation Report: Forms identifying the number of seabirds recorded for the week during the Sitka O-02 and Sitka O-02A projects.
- Stranded Bird Search and Encounter Datasheet (Environment and Climate Change Canada): Forms
 identifying numbers for seabird searches performed and the seabirds identified on these
 searches.

5.0 Sources Cited

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The Canadian Association of Petroleum Producers (CAPP). Fatigue Management in the Canada – Newfoundland and Labrador Offshore Petroleum Industry. 2022.

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