ECCC-CWS Guidance for Developing Systematic Stranded Bird Survey Protocols for Vessels and Platforms

Prepared by Environment & Climate Change Canada's Canadian Wildlife Service-Atlantic Region
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1. Background

The *Regional Assessment of Offshore Oil and Gas Exploratory Drilling East of Newfoundland and Labrador* recommends developing and implementing protocols for systematic surveys of stranded birds on offshore platforms and vessels (Section 4.6.1). Systematic surveys for stranded birds are needed to:

1) Increase survival of stranded birds by locating, documenting and releasing birds safely; and
2) Assess and quantify the impact of light pollution on Leach's Storm-Petrel and other migratory birds.

Systematic surveys should be regularly occurring, methodical, repeatable searches of a defined survey route that encompasses key areas of the vessel or platform where stranded birds may be found, such as outer peripheries of decks.

The purpose of this document is to provide guidance on developing survey protocols for stranded birds. Please contact ECCC-CWS staff for support during the development of protocols (see section 4).

2. Quick facts on stranded birds

- Migratory birds are protected under the *Migratory Bird Convention Act*. A permit from ECCC-CWS is required to capture and handle migratory birds.
- *What is a stranded bird?* A bird grounded on a vessel or platform, found dead or alive, that may be injured, exhausted and/or unable to take flight. Strandings occur due to factors such as heavy wind, disorientation during flight (e.g., fog), and attraction to artificial lighting from structures.
- *Which species are most often stranded?* Storm-petrels (mostly Leach's Storm-Petrel) represented 87% of stranded birds reported by industry in Atlantic Canada from 1998 to 2018. Of these, 72% were found alive and released. Seabirds (petrels and alcids) and their young and landbirds migrating at night are particularly vulnerable to light attraction in coastal and offshore areas.
- *When do strandings occur in Atlantic Canada?* The vast majority of Leach's Storm-Petrel strandings occur during September and October when young first leave their nests (fledging period). Most landbird strandings occur during spring and late summer-fall (migration periods).

3. Key steps for developing systematic stranded bird survey protocols

3.1 Review the following key ECCC-CWS supporting resources on stranded birds

a) Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada
b) Infographic and Reference Card - *What to do when you find a stranded bird?*
c) Seabird Identification Photocard
d) Stranded Bird Datasheet

3.2 Define and map a feasible survey route to be searched for stranded birds

- The survey route, measured in meters (not area), may be a continuous path or comprised of sections of paths that the observer(s) will thoroughly search for stranded birds on a daily basis.
- Refer to a blueprint or schematic of the vessel or platform and consult staff to ensure survey route is clearly mapped and safely accessible by the observer(s).
  - Include multiple decks of the vessel or platform where possible.
  - Ensure path is accessible during early morning hours (see section 2.3 on timing surveys).
- Survey route may include locations where stranded birds are typically sighted, such as:
  - Peripheries of vessels and platforms, such as along outer walkways and under stairs;
  - Inward areas where birds may seek protection (e.g., Sections 1a, 1b and 4a in Fig. 1); and
  - Known locations or "hot spots" where stranded birds have been observed (see "X" in Fig. 1).
- Total distance of survey route (meters) is equal to the sum of all sections searched (see Fig. 1).
  - Route may vary in width, such as inclusion of inward areas off deck peripheries.
- Define specific grids or sections within the survey route (see sections in Fig. 1) so that observers can document specific locations of stranded birds encountered.

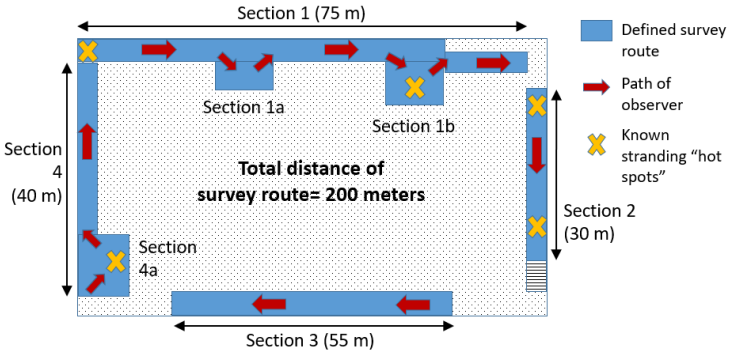

Figure 1. Example map of a platform deck showing survey route targeting peripheries, inward areas where birds may seek protection, and known stranding "hot spots." Observers will use section identifiers or GPS coordinates to document specific locations of stranded birds (see example in Fig 2).

3.3 Define timing and frequency of daily surveys

- Stranded bird surveys should occur at least once a day, preferably at dawn, to increase the likelihood of recovering live stranded birds.
- Multiple daily surveys are recommended during periods of known higher bird stranding rates (e.g., when Leach's Storm-Petrel young make their first flights in September-October) and/or when a stranding event involving more than 10 birds has been observed.

3.4 Review key information to be recorded during stranded bird surveys

- Refer to "Stranded Bird Datasheet" (see Fig. 2 example) for instructions on collecting survey data and "Infographic and Reference Card - *What to do when you find a stranded bird?*"
- Fill in "facility" and "search information" section of "Stranded Bird Datasheet" including:
  - Time at survey start and end (UTC-Coordinated Universal Time) to quantify search effort.
    - Search effort may differ depending on number of birds encountered and must be reported based on actual time elapsed.
  - If survey route is not completely searched as defined in protocol, observer(s) must document actual length surveyed (meters) and describe changes (e.g., sections not surveyed).
  - Record when no birds are encountered during survey.
  - Record number of potential predators (e.g., gulls, raptors) resting on platform/ vessel and if evidence of predation event(s) found (e.g., predatory bird attacking another bird or bird remains found).

- Fill in "stranded bird" section of "Stranded Bird Datasheet" (see example in Fig. 2)
  - Document species; if identification is uncertain, take photo(s) and contact CWS
- Example in Figure 2 shows a survey documenting a total of seven stranded birds:
  - Two Leach's Storm-Petrel were found in section 1A unoiled and alive and were released alive at site; photos taken
  - One Blackpoll Warbler was found in section 1A unoiled and dead and carcass was disposed of on site; photos taken
  - Two Leach's Storm-Petrel were found alive in section 2B and photos were taken of both birds: One was oiled and later died in care and the carcass was sent to CWS; the other was not oiled and sent to shore alive due to an injured left wing (sent to rehabilitation facility).
  - One Wilson's Storm-Petrel was found in section 3 unoiled and alive and was released alive at site; photos were taken
  - One Song Sparrow was found in section 4A unoiled and alive and later died in care; carcass disposed of on site; photos taken

Species	**Number of individuals**	**Location found** (Section or grid number or Lat-Long)	**If found DEAD (check one)**		**If found ALIVE (check one)**				**Oiled? (check one)**		**Photo(s) taken**	**Comments**
			Carcass disposed of at site	Carcass sent to CWS ↄ CWS	Released alive at site	Sent to shore alive ↄ CWS	Died in care + Carcass disposed of at site	Died in care + Carcass sent to CWS	Oiled ↄ CWS	Not oiled		
Leach's Storm-Petrel	2	1A	☐	☐	☒	☐	☐	☐	☐	☒	☒	
Blackpoll Warbler	1	1A	☒	☐	☐	☐	☐	☐	☐	☒	☒	
Leach's Storm-Petrel	1	2B	☐	☐	☐	☐	☐	☒	☒	☐	☒	
Leach's Storm-Petrel	1	2B	☐	☐	☐	☒	☐	☐	☐	☒	☒	Injured left wing; sent to rehabilitation facility
Wilson's Storm-Petrel	1	3	☐	☐	☒	☐	☐	☐	☐	☒	☒	
Song Sparrow	1	4A	☐	☐	☐	☐	☒	☐	☐	☒	☒	
			☐	☐	☐	☐	☐	☐	☐	☐	☐	

Figure 2. Stranded Bird Datasheet with example of observer's data on seven stranded birds encountered during a survey.

3.5 Pilot and refine protocol to ensure survey is feasible and repeatable by observer(s)

- Have observer(s) pilot the survey and document feedback. Make adaptations as needed.
- If further guidance is needed, please contact ECCC-CWS to discuss (see contacts in Section 4).

4. ECCC-CWS points of contact on stranded bird protocols in Atlantic Canada:

- **Newfoundland-Labrador:** Sabina Wilhelm (sabina.wilhelm@canada.ca)
- **Nova Scotia:** Carina Gjerdrum (carina.gjerdrum@canada.ca)
- **Atlantic Region:** Becky Whittam (becky.whittam@canada.ca)