

Preface to 2022 KM_B field observer forms

The following information may be useful for interpreting these forms and also includes notes from the survey:

1. Sampling of transect 107 on 7/7/2022 was abandoned because of extremely limited visibility (estimated as low as 100 m) due to dense fog along the entire transect. Because visibility did not meet Protocol requirements, the DATA_QUALITY field in deliverable KM_D is coded as '8' (bad: cannot be used) for all observations. These data should be excluded from analyses.
2. Sampling of transect 005 on 7/13/2022 was curtailed because Beaufort Sea State 3 (exceeding the Protocol limit of ≤ 2) persisted on the western end of the transect. Consequently, we sampled only ~6.2 km of the target transect length of 8.1 km. All records in deliverable KM_D with data field ON_TRANSECT taking value 'TRUE' are suitable for inclusion in analyses.
3. Sampling of transect 108 was omitted because long travel time to this short, remote transect was not concordant with schedule constraints.
4. Because frequency of observations can be high, corrections called in for observations already saved – even observations a few seconds old – usually cannot be immediately edited, as this would require pausing the survey to make corrections. Instead, corrections are noted on the field observer form along with the sequence number of the original recorded observation. These are then applied upon completing the transect or, if conditions require, during the quality control processing following field work.
5. Check marks are recorded on the field data sheet next to each correction applied in the field. These immediate corrections appear in the deliverable KM_C: Raw Data.
6. Corrections needing to be made after the survey (for example, erasing a tracklog that was accidentally initiated when nowhere near a transect) are marked on the form with a "QC" annotation. These post-survey corrections are applied to the KM_D Corrected Data product – not to the raw data.
7. Personnel for 2022 survey: Survey Observers: Steven T. Hoekman (STH), Linnea E. Pearson (LEP); Data Recorders: Edward J. Kulack (EJK), Jamie N. Womble (JNW); Vessel Captain, vessel: Justin G. Smith (JGS), R/V Capelin.
8. Survey Dates: July 6-10th and July 12-13th, 2022 (note July 6th included training and a practice transect 001 not included in KM_B).
9. Sampling of transect 101 on 7/10/22 was aborted after ~1.5 km due to Beaufort sea state 3. The transect was resampled on 7/12/2022. This KM_B includes the observer form for both 101 dates, but only data from 7/12/22 should be included in analyses.
10. Due to the recorder running out of clean field observer forms, a few forms were used for multiple transects. The form labeled transect 007 also contains transects 005, 006, and 008. Also, the form labeled transect 101 (for 7/12/2022) also contains transects 001, 002, and 003. Due to these, it was not possible to perfectly order the forms in the KM_B by ascending transect order, so a best effort was made.



SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

- ☐ Corrections to auto data capture,
or ☐ Manual record of observations

Transect 007 ^{EJK}
Vessel Capelin Page 1 of 1
Obsvr 1 STH
Obsvr 2 LEP
Start | end 10:00 / 11:00
In Alaska Daylight Time

Date 7/13/22
Recorder EJK
Weather 3
Visibility (m) 1
Beaufort 0

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
Transect: <u>006</u>	Start: <u>11:15</u>								
Weather: <u>750cc</u>	End: <u>12:13</u>								
Visibility: <u>7500m</u>			No Corrections			EJK	7/13/22		
Beaufort: <u>2</u>									
Transect: <u>008</u>	Start: <u>12:45</u>								
Weather: <u>750cc</u>	End: <u>13:46</u>								
Visibility: <u>7500m</u>			No Corrections			EJK	7/13/22		
Beaufort: <u>0</u>									
Transect: <u>005</u>	Start: <u>14:02</u>								
Weather: <u>750cc</u>	End: <u>15:03</u>								
Visibility: <u>7500m</u>			*Cut transect 1 mile short due to						
Beaufort: <u>3</u>			force 3 conditions mid bay *						
Transect: <u>004</u>	Start: <u>15:18</u>								
Weather: <u>750cc</u>	End: <u>16:09</u>								
Visibility: <u>7500m</u>			No Corrections			EJK	7/13/22		
Beaufort: <u>1</u>									

Record key is present only for correction to automated entries.

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06

Transcribe time and location from GPS waypoints after transect is completed.

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

In Alaska Daylight Time

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/7/2022
Recorder JNU
Weather (1) < 50 °C (1) > 50 °C (2) Fog (3) Mist (4) Rain
ibility (m) (1) > 500m (2) 250-500m (3) < 250m
Beaufort (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/7/2022
Recorder JNW
Weather (1) < 50 °C (1) > 50 °C (2) Fog (3) Mist (4) Rain
ibility (m) (1) > 500m (2) 250-500m (3) < 250m
Beaufort (0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/7/2022
Recorder JNCO
Weather _____
Visibility (m) (0) < 50 (1) > 50 (2) Fog (3) Mist (4) Rain
Beaufort (1) > 500m (2) 250-500m (3) < 250m
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

☒ Corrections to auto data capture,
or ☐ Manual record of observations

Transect 016

Vessel Casper Page 1 of 1

Obsrvr 1 *STH*

Observer 2

Start | end 543 | 666

Date 7/10/2022

Recorder *[Signature]*

Weather

Visibility (m)       

Beaufort

When recording manually, note changes to starting conditions below on a single row between observations

[illegible]

Record key is present only for correction to automated entries.

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 9/10/2022
Recorder JNW
Weather _____
Visibility (m) (1) < 50 (C) (1) > 50 (C) (2) Fog (3) Mist (4) Rain
Beaufort (1) > 500m (2) 250-500m (3) < 250m
(0) calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☒ Manual record of observations

Date 7/18/2022
Recorder JNW
Weather _____
Visibility (m) (1) < 50 C' (1) > 50 C' (2) Fog (3) Mist (4) Rain
(1) > 500m (2) 250-500m (3) < 250m
Beaufort _____
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/18/2022
Recorder JNW
Weather _____
visibility (m) (1) > 500m (1) > 50 C° (2) Fog (3) Mist (4) Rain
Beaufort (1) > 500m (2) 250-500m (3) < 250m
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

In Alaska Daylight Time

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]



or ☒ Corrections to auto data capture,
☐ Manual record of observations

Date 7/8/2022
Recorder JNW
Weather _____
Visibility (m) (1) < 50 C' (1) > 50 C' (2) Fog (3) Mist (4) Rain
Beaufort (1) > 500m (2) 250-500m (3) < 250m
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/8/2022
Recorder JNL
Weather
Visibility (m) (1) < 50 (2) > 50 (3) Fog (4) Mist (5) Rain
Beaufort (1) > 500m (2) 250-500m (3) < 250m
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/8/2022
Recorder JNB
Weather _____
Visibility (m) (1) > 500m
Beaufort (1) 1-20 cm
(0) < 50 °C (1) > 50 °C (2) Fog (3) Mist (4) Rain
(1) > 500m (2) 250-500m (3) < 250m
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

In Alaska Daylight Time

Beaufort

(0) C'alm (1) -20 cm (2) 20-50 cm (3) 0,5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

☒ Corrections to auto data capture,
or ☐ Manual record of observations

Transect 101
Vessel Capeleen Page 1 of 1
Obsrvr 1 STH
Obsrvr 2 KEP
Start | end 1008 | 1025
In Alaska Daylight Time

Date 7/10/2022
Recorder SWW
Weather _____
Visibility (m) _____
Beaufort _____

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
	1019		Wumpy sea		conditions.				
	Survey		about		@1025				
			to stoppy		conditions.				
			to resume		again				
			walk		when conditions.				
			No correction		- 7/10/2022				
	on 7/10/22		Dead		sea 0Hn				
	location:	58			31.9580 N				
		136			03.046 W				
	@1032		reported		by Hans				
	anchor		sea		Wolf.				

Record key is present only for correction to automated entries.

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06

Transcribe time and location from GPS
waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/10/2022

Recorder JNU

Weather _____

Visibility (m) (1) > 500m (2) 250-500m (3) < 250m

Beaufort (1) Calm (2) 1-20 cm (3) 20-50 cm (4) 0.5-1 m (5) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



 Corrections to auto data capture,
 or  Manual record of observations

103

Capelin

Page 1 of 1LEP

Only observer, or left observer of 2-person team

Only observer, or le
STH

Right observer of a 2-person team

Right observer of a 2-person team

In Alaska Daylight Time

7/6/2022

IN 110

(0) $< 50^{\circ}\text{C}$ (1) $> 50^{\circ}\text{C}$ (2) Fog (3) Mist (4) Rain

④

(1) $> 500\text{m}$ (2) $250\text{--}500\text{m}$ (3) $< 250\text{m}$

(0) Calm (1) 0-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key is present only for correction to automated entries.

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Start | end

104

Capelin

Page 1 of 1

LEP

Only observer, or left observer of 2-person team

STH

Right observer of a 2-person team

1539 / 1628

In Alaska Daylight Time

Beaufort

7/6/2022
JNW

(0) < 50 °C (1) > 50 °C (2) Fog (3) Mist (4) Rain

(1) > 500m (2) 250-500m (3) < 250m

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/7/2022
Recorder JALW
Weather _____
Visibility (m) (0) < 50 m (1) > 50 m (2) Fog (3) Mist (4) Rain
Beaufort (1) > 500 m (2) 250-500 m (3) < 250 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

☒ Corrections to auto data capture,
or ☐ Manual record of observations

Transect 107
Vessel Capelin Page 1 of 1
Obsvr 1 STH
Obsvr 2 LEP
Start | end 1503 / 1526
In Alaska Daylight Time

Date 7/7/2022
Recorder JNW
Weather (1) >50 °C
Visibility (m) (1) >500m
Beaufort (0) Calm

When recording manually, note changes to starting conditions below on a single row between observations

Record key	Angle 0-359°	Distance (m)	Behavior W/F	# in Group	Species K/M/U	GPS Waypnt	ADT 24:mm	Latitude dd.ddddd	Longitude -ddd.ddddd
1504	Visibility	150	20m	@	start of transect				
1505	Visibility	100m							
Sketch Transect aborted @ mid-channel @ 1526. Survey not completed due to dense fog. 7/7/2022									
Would 10 minutes, but weather didn't improve.									



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Start | end

Right observer of a 2-person team

In Alaska Daylight Time

Beaufort

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/8/2022

Recorder JNW

Weather _____

Visibility (m) (1) < 50 C' (1) > 50 C' (2) Fog (3) Mist (4) Rain

Beaufort (1) > 500m (2) 250-500m (3) < 250m

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Start | end

Page 1 of 1

Right observer of a 2-person team

In Alaska Daylight Time

Beaufort

Two

(0) $< 50^{\circ}\text{C}$ (1) $> 50^{\circ}\text{C}$ (2) Fog (3) Mist (4) Rain

(1) $> 500\text{m}$ (2) $250\text{--}500\text{m}$ (3) $< 250\text{m}$

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/9/2022

Recorder JNC

Weather _____

visibility (m) (1) < 50 C' (1) > 50 C' (2) Fog (3) Mist (4) Rain

Beaufort (1) > 500m (2) 250-500m (3) < 250m

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

Record key is present only for correction to automated entries.

Transcribe time and location from GPS waypoints after transect is completed.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

☒ Corrections to auto data capture,
or ☐ Manual record of observations

Transect

Vessel

Obsrvr 1

Obsrvr 2

Start | end

113

Captein

Page 1 of 1

574

Only observer, or left observer of 2-person team

CC1

Right observer of a 2-person team

In Alaska Daylight Time

Date _____

Recorder

Weather

Visibility (m)

Beaufort

7/9/2022

WLS

(0) <50 (°C) (1) >50 (°C) (2) Fog (3) Mist (4) Rain

(1) $> 500\text{m}$ (2) $250\text{--}500\text{m}$ (3) $< 250\text{m}$

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

[illegible]

Record key is present only for correction to automated entries.

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06

Transcribe time and location from GPS waypoints after transect is completed.



☐ Corrections to auto data capture,
or ☐ Manual record of observations

(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.



☒ Corrections to auto data capture,
or ☐ Manual record of observations

Date 7/9/2022
Recorder JNC
Weather _____
Visibility (m) (1) > 500m (2) 250-500m (3) < 250m
Beaufort (1) Calm (2) 1-20 cm (3) 20-50 cm (4) 0.5-1 m (5) 1-2 m

When recording manually, note changes to starting conditions below on a single row between observations

[illegible]

Transcribe time and location from GPS waypoints after transect is completed.