Preface to 2012 KM_B field observer forms

In interpreting these forms, the following information may be useful:

1. At the request of one of the observers, murrelets flying too quickly across the transect for distance and angle to be estimated were episodically called to the recorder, who noted them on some field observer forms. Such observations do not fit the strictures of the monitoring protocol, but it was thought these notes might possibly be of future use for other purposes. They are recorded on the forms as behavior/group size/species. For example, F2M was the shorthand used for Flying 2 Marbled.
2. Because the frequency of observation can be so high in the field, corrections called in for observations already saved – even observations a few seconds old – cannot be immediately edited into the database, as this would require pausing the survey to make each correction. Instead, the correction is noted on the field observer form along with the approximate timestamp of the original recorded observation. These are then applied at the end of the transect or, if conditions require, at the quality control process following the field work. By way of illustration, a notation of "16:33 2U SB 2M" is shorthand for the correction "at the observation stamped at time 16:33, 2 unidentified species murrelets should be 2 marbled murrelets."
3. Transect 008 was originally begun on 7/12 at 17:39. It was quickly stopped and was restarted from the beginning at a later time. The form reflecting the original attempt covering 17:39 through 17:41 should be ignored. Its values were removed from the database.
4. Transect 020 had to be aborted on 7/10 due to weather conditions that were beyond those required by the protocol. It was redone on 7/11. The 7/10 form should be ignored. The database was expunged of the 7/10 observations.
5. Transect 024 had to be truncated due to ice conditions. The data obtained up to the icing point were retained.
6. Transect 025 was not attempted. It was totally locked in ice.
7. On 7/7 it was quickly determined there was a significant fault in the recording software. Per protocol, the data recorder reverted to entering observations manually on paper and collecting locations by handheld GPS. Transects recorded this way were 301, 302, 303, and 304. Program staff subsequently decided that the lower accuracy of manual recording and the significant time required to transcribe and verify the hand records were undesirable. Resources were available, however, to resurvey those transects on 7/12 using automated data capture. The final database reflects only the 7/12 observations of 301 through 304.
8. Forms whose data were totally disqualified for reasons explained above have a pink slash across them. They are still included here in order to preserve the complete record of field activities.

BJ 9/12/2012

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 001
Vessel FOG LADY Page 1 of 1
Obsrvr 1 MJK
Only observer, or left observer of 2-person team
Obsrvr 2 STA
Right observer of a 2-person team
Start | end 10:15 | 18:23
In Alaska Daylight Time

Date 7/8/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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		Start W/P			233			
	Opportunistic counts of flying birds without angle / distance are recorded here on paper, but not related in file geodatabase, at request of one observer.								
			F	2	M				

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 002
Vessel FOGLARK Page 1 of __
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 13:32 14:16 |
In Alaska Daylight Time

Date 7/8/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
		NO	EXCEPTIONS						

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 003
Vessel FOG CARC Page 1 of 1
Obsrvr 1 MAK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 14:25 15:06 |
In Alaska Daylight Time

Date 7/8/2012
Recorder WED
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
14:32		1-U	SB	(M)	need		to MOST		
14:41		1 C	To	1K	process		corrections		
15:08		App	failed	before 2			above correctly		
		could be applied					after close		
		of transect - fix during QC							
			1:12 (M)						

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 004
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MOK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 11:39 12:34 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WES
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) >500m (2) 250-500m (3) < 250m
Beaufort 2/1
(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	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
~11:44		app	STD	approach					
		Recording	stopped	- no	data	loss			
N11:52		W1K/W2M	SB	W3M	✓				
1158		app	stopped						
		recording	resumed	with	no	data	loss		
12:05	W3U	SB	W1U	W2K	✓				
N 12:30		2U	SB	2M	✓				

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.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 005
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer or left observer of 2-person team
Obsrvr 2 STA
Right observer of a 2-person team
Start | end 13:14 14:13 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WFO
Weather 1
(0) <50% CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Off transect @ 13:20						far island		
	back on transect @					13:28			
13:46		81 CM	SB	6 K		Can	20 ✓		
13:49		20	SB	2K ✓					
14:09		20M	SB	1M		1K ✓			
	Observed						accidentally	with	no location
			F	2	J				
			F	1	K				
			F	4	J				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 006
Vessel FOGLARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 CTH
Right observer of a 2-person team
Start | end 14:24 15:23
In Alaska Daylight Time

Date 7/12/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2/1/0
(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	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
~14:42	W	1 U	SB	W 1M					
W 14:58	W2p		SR	W2K					
	app failed ~ 14:59								
	back up with no						lost data		
	Transect paused 15:06 to navigate								
	past island								
	app failed - restarted						successfully		
	Paused other side						of island	15:14	
	Tracklog left recording for 5 minutes after close of Transect - should								
			LC	trimmed.					
	Observed without								
			F	1	M				
			F	2	M				

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 007
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 16:28 19:26 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WFD
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1 0 1
(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	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
~16:33	20	SB	2M						
~16:46	10	SB	2M	U					
16:58	30	SB	3M	U					
	Observed one adult with chick								
			F	3	M				

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 008
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MAK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 17:39 17:44 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WFT
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	started	17:39		few	1		about		607
		stopped		before	obs		ing		d
			311						
	*	ABANDAND				FALSE		START(*	
		Dodata	during		QC		✓		

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 008
Vessel FOG CAPE Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 SEK
Right observer of a 2-person team
Start | end 18:23 19:16 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WES
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
		-	NO OTHER BIRDS						
			F	2	M				

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 009
Vessel FOGLARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 16:46 17:14 |
In Alaska Daylight Time

Date 7/9/2012
Recorder WEB
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Observed without angle/distance:								
			F	4	U				
			F	1	U				
17:07		2M	SB	2K	✓				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 010
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 10:08 | 10:35
In Alaska Daylight Time

Date 7/9/2012
Recorder WFS
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Observed with no angle/distance								
			F	2	U				
			F	2	U				
10:27		1K	SB	1K+1U		✓			

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:
~~X~~ Corrections to auto data capture,
or ○ Manual record of observations

Transect 011
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 15:32 | 15:48
In Alaska Daylight Time

Date 7/9/2012
Recorder WES
Weather 3/4
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1/2
(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	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
	At request of an observer these								
	were recorded auditorally with that								
			F	1	K				
			F	1	M				
	After transect closed these late reports								
	90	150	W	2	U			58.9167	-136.2717
	90	150	W	1	K			"	"
	"	"	W	1	U			"	"

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 012
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MAE
Only observer, or left observer of 2-person team
Obsrvr 2 STA
Right observer of a 2-person team
Start | end 13:20 13:53 |
In Alaska Daylight Time

Date 7/9/2012
Recorder WEJ
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1 0 1
(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	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
	Accidental observations recorded on paper at observer's request:								
			F	2	U				
			F	3	M				
13:26		W24	SB	W2M		✓			
13:43		WU	SB	WIK		✓			

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect: 013
Vessel: FOGLARIC Page 1 of 1
Obsrvr 1: MAK
Only observer, or left observer of 2-person team
Obsrvr 2: STH
Right observer of a 2-person team
Start | end: 12:48 | 12:56
In Alaska Daylight Time

Date: 7/9/2012
Recorder: WES
Weather: 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m): 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort: 1
(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	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 start waypoint					242			
	Transect end waypoint					243			
~12:49		5m	SB	4	U + 1 K ✓				
~12:53		1U	SB	1	K ✓				

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect: 014
Vessel: FOG LARK Page 1 of 1
Obsrvr 1: MAK
Only observer, or left observer of 2-person team
Obsrvr 2: STH
Right observer of a 2-person team
Start | end: 15:57 | 16:14
In Alaska Daylight Time

Date: 7/13/2012
Recorder: WFS
Weather: 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m): 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort: 1
(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	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
						✓			
13:59	data		Feed		13:59				
	Observations, weight					location		information	
			F	3	J				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 015
Vessel FOG LOCK Page 1 of 1
Obsrvr 1 MDC
Only observer or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 16:23 16:59 |
In Alaska Daylight Time

Date 7/13/2012
Recorder WF3
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0
(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	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
16:32		10	SB	1M	✓				
	Observed		another						
		F	2	M					

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.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ○ Manual record of observations

Transect 016

Vessel FOG LARK Page 1 of 1

Obsrvr 1 MAK
Only observer, or left observer of 2-person team

Obsrvr 2 STH
Right observer of a 2-person team

Start | end 17:52 18:17 |
In Alaska Daylight Time

Date 7/13/2012

Recorder WED

Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

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

Beaufort 1
(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	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
			NO EXCEPTIONS				—		
	Observed anecdotally:								
			F	3	U				
			F	4	U				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 017
Vessel FOG LAKE Page 1 of 1
Obsrvr 1 MDE
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 12:11 17:38 |
In Alaska Daylight Time

Date 7/13/2012
Recorder WFT
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
a 13:25		10	SBIK ✓						
	No location data collected - Cal disturbance								
			F	1	M				
			F	2	M				
			F	2	M				
			F	1	M				
			F	1	M				
			F	1	K				
			F	2	M				
			F	2	M				
			F	2	K				

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 018
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MAK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 17:21 17:45 |
In Alaska Daylight Time

Date 7/14/2022
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Observation at TL no location								
			F	1	K				

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 019
Vessel FOC Cable Page 1 of 1
Obsrvr 1 MJE
Only observer, or left observer of 2-person team
Obsrvr 2 SCH
Right observer of a 2-person team
Start | end 16:40 17:09 |
In Alaska Daylight Time

Date 7/4/2012
Recorder WTO
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
		—	NO	EXCESS					

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 020
Vessel ~~FOG LARK~~ Page 1 of ___
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 ~~STH~~
Right observer of a 2-person team
Start | end 13:45 |
In Alaska Daylight Time

Date 7/10/2012
Recorder FWS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 3
(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	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		started						
		to	west						

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:
Ø Corrections to auto data capture,
or ○ Manual record of observations

Transect 020
Vessel FOG owl Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 11:44 12:23
In Alaska Daylight Time

Date 7/11/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
11:50		45	0 SB	1	45 0	✓			
~ 12:09		W	U S	B	W 1M	✓			
~ 12:11		W2	U	SB	W 2M	✓			
12:17		1	U	SB	1M	✓			

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 021
Vessel FOG LAKE Page 1 of 1
Obsrvr 1 MJK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 11:10 11:36 |
In Alaska Daylight Time

Date 7/11/2012
Recorder WES
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1/0
(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	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
11:18		1 pedrey	SB	1K		✓			
11:23		1 U	SB	1K	✓				
11:33		30	SB	3M	✓				

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 022
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MAK
Only observer or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 10:16 | 10:44
In Alaska Daylight Time

Date 7/11/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
		No location information							
			F	2	U				
10:19		W 3M	SB	{W2M ✓					
				{W1K ✓					
		Transect paused					To avoid vessel		
			crossing ahead						
10:37		10	SB	2U ✓					
			E	1	M				
10:39		2U	SB	2K ✓					

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 023
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MK
Only observer or left observer of 2-person team
Obsrvr 2 STA
Right observer of a 2-person team
Start | end 9:20 10:06 |
In Alaska Daylight Time

Date 7/11/2012
Recorder WT 5
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 3/1
(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	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
		NO EXCEEDANCES							

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 024
Vessel FOGLARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 15:45 15:55 |
In Alaska Daylight Time

Date 7/14/2012
Recorder WES
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Berg		bit	ice	encountered			across	
			entire	transect.					
	Abandoned		at	waypt			255	close	
	to		impassable				ice.		

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 025 Date 7/9/2012
Vessel Foglark Page ___ of ___ Recorder WFS
Obsrvr 1 _____ Weather _____
Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Obsrvr 2 _____ Visibility (m) _____
Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m
Start | end _____ | Beaufort _____
In Alaska Daylight Time (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	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
	NOT REACHABLE								
	DUE TO HEAVY								
	ICE THIS YEAR.								

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 301 Date 7/14/2012

Vessel FOG LARK Page 1 of 1 Recorder WEJ

Obsrvr 1 MDK Weather 0

Only observer, or left observer of 2-person team (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 STH Visibility (m) 1

Right observer of a 2-person team (1) > 500m (2) 250-500m (3) < 250m

Start | end 13:27 13:37 | Beaufort 2/3/2

In Alaska Daylight Time (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	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
	Starting		waypoint			272			
	Ending		waypoint			273			
		- no	except	tracks					

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 302
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 SCH
Right observer of a 2-person team
Start | end 11:56 12:55 |
In Alaska Daylight Time

Date 7/14/2012
Recorder WFJ
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) >500m (2) 250-500m (3) <250m
Beaufort 0/1/0/1
(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	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
	STARTING WAYPOINT					270			
	ENDING WAYPOINT					271			
12:30	W2m + W3m		FD	W2m + W2m					
	Observations with no locations:								
			F	3	U				
			F	6	M				
			F	2	M				
			F	1	M				
			F	1	M				
	FORK TAIL STORM PETREL						OBSERVED		

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:
~~X~~ Corrections to auto data capture,
or ○ Manual record of observations

Transect 303
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MK
Only observer, or left observer of 2-person team
Obsrvr 2 SH
Right observer of a 2-person team
Start | end 10:33 11:39 |
In Alaska Daylight Time

Date 7/14/2012
Recorder WTS
Weather 1
(0) >50 CC (1) <50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) <500m (2) 250-500m (3) >250m
Beaufort 0
(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	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
	Starting Waypoint					268			
	Ending Waypoint					269			
	sat on Transect flag beginning						10:40	SB	10:35
w 10:35		40	SB	4M	✓				
10:48	Corrected analytical heading had been								
	0 deg. Transect not perfectly straight								
11:04		30	SB	3M	✓				
11:05		10	SB	8M+2K	✓				
11:06		delay 38 to		3M	✓				
11:09		50m	SB	4M+1K	✓				
11:16		40m	SB	4K+2M	✓				
	Observations without location:								
			F	2	J				
			F	4	J		F	2	J
			F	2	J		F	1	J
			F	3	J		F	2	J
			F	4	J		F	3	M
			F	4	J		F	1	M
			K	3	U		F	1	M

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 304
Vessel FOX CARIC Page 1 of 1
Obsrvr 1 MDK
Only observer or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 9:36 10:13 |
In Alaska Daylight Time

Date 7/4/2012
Recorder WFS
Weather 1 2
(0) >50 CC (1) <50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1 2 3
(1) < 500m (2) 250-500m (3) > 250m
Beaufort 2 3
(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	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
	START TRK WAYPOINT					266			
	END TRK WAYPOINT					267			
9:43	WU	SB	W	1	✓				
9:50	WU	SB	W	1	✓				
			F	2	U				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 305
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 13:55 16:30 |
In Alaska Daylight Time

Date 7/8/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 0/1
(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	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 start				WP	240			
	Transect end				WP	241			
15:58			passing = unidentified			✓			
	halted app			13:5					
	restarted - no data lost								
			F	20	M				
16:04		50 m = 20 meters				✓			
16:08		2m = 2K ✓							
			F	3	U				
			F	1	K				
			F	4	M				
			F	4	K				
			F	6	U				
			F	1	K				
			F	1	K				
			F	1	M				
		16:34 restarted				no data lost			
16:35		1m + 1K SB				2K ✓			
			F	2	M				
			F	1	M				
	Anecdotal flying birds with no beak recorded on paper at observer's request								

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 306
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDE
Only observer, or left observer of 2-person team
Obsrvr 2 JTH
Right observer of a 2-person team
Start | end 10:40 11:00 |
In Alaska Daylight Time

Date 7/8/2012
Recorder WFJ
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2/1
(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	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
	Start transect				WP	234			
	End transect				WP	235			
	— NO EXCEPTIONS —								
	Opportunistic observation of flying								
	birds without						distance recorded on		
	paper at						request of bird observer.		
			F	1	M				
			F	1	M				

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 307
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STM
Right observer of a 2-person team
Start | end 11:26 11:55 |
In Alaska Daylight Time

Date 7/19/2012
Recorder WES
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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		Start	waypoint		236			
	Transect		End	waypoint		237			
11:36	50	should be		11	U	✓			
11:40	5	should be		8		✓			
11:43	App	failed							
	Retrieved successfully								
	Anecdotal observations with no location information recorded on observation logs								
			F	2	U				
			F	2	M				

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 308
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MJK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 12:44 12:59 |
In Alaska Daylight Time

Date 7/8/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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 start				WP	238			
	Transect End				WP	239			
Needed	Observation without distance must be deleted ✓								
12:50p		GC should be COM ✓							
	Accidental information						random on		
	pulled at request of						and discarded		
			F	2	U				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 309 | Date 7/16/2012
Vessel FOGLARK Page 1 of 1 | Recorder WFS
Obsrvr 1 STH | Weather 1

Only observer, or left observer of 2-person team | (0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 - None - | Visibility (m) 1

Right observer of a 2-person team | (1) > 500m (2) 250-500m (3) < 250m

Start | end 11:29 | 11:48 | Beaufort 1/0/1

In Alaska Daylight Time | (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	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
	STARTING WAYPOINT					274			
	ENDING WAYPOINT					275			
		Did NOT set on transect until							
			8 minutes in - corrected post processing.						

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 30
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 10:18 11:22 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WES
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2 1 / 2
(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	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
	Starting waypoint					256			
	Ending waypoint					257			
~10:22		2U	SB	2M	✓				
10:26		2P	SB	2M	✓				
10:33		1P	SB	1U	✓				
~10:37		4P	SB	4U	✓				
		0 PP	weak diving			WP	search		
			no observations				left		
~11:19		U	SB	1M	✓				
	Observed with no location:								
		F	1	M					

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 311
Vessel FOG LADY Page 1 of 1
Obsrvr 1 MDE
Only observer, or left observer of 2-person team
Obsrvr 2 SEK
Right observer of a 2-person team
Start | end 17:49 | 18:16 |
In Alaska Daylight Time

Date 7/12/2012
Recorder WES
Weather 1 / 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) >500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	17:54	app failed							
		back in CO shoals							
17:59		W2U	5A	W2M					
	Anecdotal:								
			F	5	J				

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:
~~X~~ Corrections to auto data capture,
or ○ Manual record of observations

Transect 312
Vessel ~~FOG LARK~~ Page 1 of 1
Obsrvr 1 MK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 14:58 15:14
In Alaska Daylight Time

Date 7/9/2012
Recorder WFS
Weather 4
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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 start				WP	244			
	Transect end				WP	245			
	Auto total observations recorded at screen							without locations for observer	
		F	1	K					
		F	2	U					
	"On Transect" in QC				Sat formatted,			corrected	

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:
Ø Corrections to auto data capture,
or ○ Manual record of observations

Transect 313 | Date 7/16/2012
Vessel FOG LARK Page 1 of ___ | Recorder WFS
Obsrvr 1 STH | Weather 1
Only observer, or left observer of 2-person team | (0) < 50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Obsrvr 2 - NONE | Visibility (m) 1
Right observer of a 2-person team | (1) > 500m (2) 250-500m (3) < 250m
Start | end 13:28 14:18 | Beaufort 0 / 1
In Alaska Daylight Time | (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	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
	STARTING	WAYPOINT				276			
		TURN 1				277			
		TURN 2				278			
		TURN 3				280			
		TURN 4				281			
	ENDING	WAYPOINT				282			
	14:14	app	crashed			20	seconds		
		no	data			lost.			

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 314
Vessel FOG CARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 9:54 10:32 |
In Alaska Daylight Time

Date 7/11/2012
Recorder WFJ
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) >500m (2) 250-500m (3) < 250m
Beaufort 3/2/1
(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	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
	S-East		waypoint			246			
	End		waypoint			247			
	Recorded					tally 2			
				2	M				
	Midpoint		ground truth			indicate			
			boat transect						

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 315
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 15:09 15:44 |
In Alaska Daylight Time

Date 7/13/2017
Recorder WFS
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
		Starting	waypoint			264			
		Ending	waypoint			265			
15:31		WK	SB	WM		✓			
		Observed without location information!							
			F	4	J				

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:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 316
Vessel FOG LARC Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 13:23 14:10 |
In Alaska Daylight Time

Date 7/13/202
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Starting Waypoint					262			
	Ending waypoint					263			
13:47	WRM SB W2K ✓								
~1:57	WSU SB W3M ✓								
1:59	ADFZU to edge ✓								
	Observed without location information								
			F	2	M				
			F	2	M				
			F	6	M				

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 317
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDC
Only observer or left observer of 2-person team
Obsrvr 2 STK
Right observer of a 2-person team
Start | end 11:56 12:22 |
In Alaska Daylight Time

Date 7/13/2012
Recorder WES
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2/1/2
(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	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
		Starting Waypoint				258			
		Ending Waypoint				259			
12:12	1P	SB	1K ✓						
12:18	50	SB	1M ✓						

Record key is present only for correction to automated entries.

Transcribe time and location fro
waypoints after transect is co

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 318
Vessel Focus Page 1 of 1
Obsrvr 1 MDC
Only observer, or left observer of 2-person team
Obsrvr 2 STF
Right observer of a 2-person team
Start | end 12:30 12:58 |
In Alaska Daylight Time

Date 7/13/2012
Recorder WFS
Weather 1 / 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2 / 1
(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	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
	Started		waypoint			260			
	Ending		waypoint			261			
		- NO EXCEPTIONS -							

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:
Ø Corrections to auto data capture,
or ○ Manual record of observations

Transect 319
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MAK
Only observer, or left observer of 2-person team
Obsrvr 2 STA
Right observer of a 3-person team
Start | end 8:44 9:09 |
In Alaska Daylight Time

Date 7/4/2012
Recorder WF
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	Start		WPoint			248			
	Wind		WPoint			249			
	End		WPoint			250			
8:47		W4U	SB	W2K		W2U ✓			
8:48		W2U	SB	W2K			✓		
8:47						SB	W2K	W WU ✓	
8:49		W4U	SB	2K	2m	✓			
8:54		W2M	SB		W2M	✓			
		track log	lower	-	location/gps		discard		
		-	covered w/				data log		
8:56		W2U	SB		W2M	✓			
		No location in							
			F	2	M				
		W2M	@ 20m		delete	✓			

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:
- [x] Corrections to auto data capture,
- or [ ] Manual record of observations

Transect 320
Vessel FOC LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 13:24 13:47
In Alaska Daylight Time

Date 7/16/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	Bargy		Bit ice present across						
			entire transect.						
		Starting Waypoint				251			
		Ending Waypoint				252			
213:30		20 SR 2K							

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.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
- (X) Corrections to auto data capture,
- or ( ) Manual record of observations

Transect 321

Vessel FOG LARK Page 1 of 1

Obsrvr 1 MDK
Only observer, or left observer of 2-person team

Obsrvr 2 STF
Right observer of a 2-person team

Start | end 14:04 14:31
In Alaska Daylight Time

Date 7/11/2012

Recorder WFS

Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

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

Beaufort 1/0
(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	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
	Start waypoint 253								
	Ending waypoint 254								
	Vessel crossed transect N 800m ahead of survey								
	GPS momentary disconnect caused 60 second track log discontinuity								
	NO GROUPS OBSERVED								

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.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
~~⊘~~ Corrections to auto data capture,
or ○ Manual record of observations

Transect 301
Vessel FOG LARK Page 1 of 1
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 12:06 12:15 |
In Alaska Daylight Time

Date 7/7/2012
Recorder WFS
Weather 1
(0) > 50 CC (1) ~50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	GPS lat/long START					068			
	GPS lat/long STOP					069			
12:07		3K 2M		1	M	2K 3M ✓			
		160° in at	220°						
→	Data recording software							suspected	
		of incorrect recording.						TLJ	
		transect was						downloaded and	
		re downloaded		on		7/14/2012.			

Record key is present only for correction to automated entries.

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

SEE NOTE ON FINAL PAGE

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
(X) Corrections to auto data capture,
or ( ) Manual record of observations

Transect 302
Vessel FOG LARK Page 1 of 3
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end | In Alaska Daylight Time

Date 7/7/2012
Recorder WFJ
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1/2
(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	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
	Start waypoint					070			
	End waypoint					116			
12:40		U	Change from						
12:43	180	70	F	2	M				
12:51		change	U	to	M				
13:01	RECORDING APPLICATION FAILED								
12:55	RESTARTED FOR PAPER WITH GPS								
13:01	WAYPOINT REFERENCES								
	150	60	W	2	U	71			
	210	90	W	3	M	73			
	120	150	W	5	U	74			
	195	220	W	2	U	75			
	145	100	W	1	U	76			
	260	80	W	1	M	77			
	160	180	W	2	M	78			
	176	140	W	2	M	79			
			W	1	U				
	150	200	W	2	U	80			
	160	190	W	2	U	81			
	160	200	E	2	U	82			
	170	160	F	1	M	83			
	215	80	W	1	M	84			

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 302
Vessel FOG CAMP Page 2 of 3
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 SK
Right observer of a 2-person team
Start | end | In Alaska Daylight Time

Date 7/7/2012
Recorder WES
Weather 1
(0) < 50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m)
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	175	50	W	3	M	85			
	145	180	W	2	M	86			
			W	1	U	"			
	270	80	W	2	M	87			
			W	1	U	"			
	200	180	W	1	M	88			
			W	1	F	"			
	220	110	W	1	M	89			
	190	190	W	1	M	90			
	190	80	W	1	M	91			
	110	40	W	2	M	92			
	135	50	W	1	M	93			
	200	40	W	2	M	94			
	160	90	W	2	U	95			
	150	50	W	2	M	96			
	110	35	W	1	M	97			
	270	50	W	1	M	98			
	180	190	F	2	U	99			
	190	200	F	2	M	100			
	190	250	W	1	U	101			
	215	90	W	2	M	102			
	185	190	F	2	M	103			
	200	40	W	1	F	104			
	199	150	W	1	M	105			
			W	1	U	11			

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 302
Vessel FOG LARK Page 3 of 3
Obsrvr 1 MAK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end | In Alaska Daylight Time

Date 7/7/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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
	180	200	F	2	M	106			
	180	170	F	1	K	107			
	65	146	W	2	U	108			
	220	180	W	2	U	109			
	205	110	W	2	M	110			
	150	180	F	2	M	111			
	135	180	F	2	M	112			
	210	40	W	1	K	113			
	250	140	W	1	M	114			
	150	140	W	2	U	115			
	Recording application activated								
	faulted. This transect was								
	recorded under proper operations								
	on 7/14/2012.								

Record key is present only for correction to automated entries.

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

SEE NOTE ON FINAL PAGE

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
○ Corrections to auto data capture,
or ⊘ Manual record of observations

Transect 303
Vessel EOG LARK Page 1 of 6
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 14:01 14:53 |
In Alaska Daylight Time

Date 7/7/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 1
(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	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 start					117			
	Transect end					207			
	185	250	W	1	U	118			
	170	150	W	1	U	119			
	215	60	W	1	M	120			
	180	150	F	2	K	121			
	180	200	F	2	M	122			
	"	"	"	"	"	"			
	170	180	W	1	M	123			
	180	200	F	3	M	124			
	"	"	F	2	U	"			
	150	200	W	1	M	125			
	160	120	F	2	M	126			
	100	150	F	5	U	127			
	"	"	"	2	"	"			
	"	"	"	2	"	"			
	235	120	W	2	M	128			
	180	200	F	5	U	129			
	190	200	F	3	M	130			
			F	5	U		outbound		
			F	4	U				
			F	4	U				
			F	2	U				
			F	2	U				

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 303
Vessel FOG LARK Page 2 of 6
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end | In Alaska Daylight Time

Date 7/7/2012
Recorder WFS
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(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	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
	?	?	F	4	U				
	240	50	W	1	K	131			
	?	?	F	7	U				
	?	?	F	2	U				
	245	110	W	2	M	132			
	165	75	W	3	M	133			
	120	40	W	1	M	134			
	135	50	W	2	M	135			
	215	140	W	2	U	136			
	?	?	F	5	U				
	?	?	F	2	U				
	170	80	W	6	M	137			
	195	120	W	2	M	138			
	120	40	W	1	U	139			
	225	50	W	2	M	148			
	179	60	W	2	U	141			
	165	150	W	3	U	142			
	155	80	W	1	M	143			
	160	200	W	10	U	144			
	230	150	W	7	M	145			
	?	?	F	2	U				
	?	?	F	2	U				
	?	?	F	2	M				
	240	80	W	1	K	146			

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 303
Vessel FOG LARK Page 3 of 6
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STA
Right observer of a 2-person team
Start | end | In Alaska Daylight Time

Date 7/7/2012
Recorder WFJ
Weather 1
(0) < 50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	260	150	W	2	M	147			
			F	2	M				
	250	150	W	2	M	148			
			F	5	U				
	160	60	W	5	M	149			
	210	180	W	2	U	150			
	165	180	W	2	U	151			
			F	2	M				
			F	1	M				
			F	3	M				
	140	190	W	3	M	152			
	210	220	W	10	U	153			
			F	6	U				
	225	150	W	2	M	154			
	183	200	W	5	M	155			
	178	250	W	4	U	156			
	178	80	W	2	M	157			
	160	150	F	2	U	158			
			F	2	M				
			F	6	M				
			F	2	M				
	174	220	W	8	U	159			
	210	220	W	7	U	160			
			F	1	U				

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 303

Vessel FOG LARC Page 4 of 6

Obsrvr 1 MDK
Only observer, or left observer of 2-person team

Obsrvr 2 SHH
Right observer of a 2-person team

Start | end _____ |
In Alaska Daylight Time

Date 7/6/2012

Recorder WES

Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain

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

Beaufort 2
(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	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
	188	100	W	1	M	161			
	145	180	W	1	M	162			
	150	220	W	1	U	163			
			F	2	U				
	135	120	W	2	U	164			
	175	160	W	4	M	165			
	〃	〃	W	2	U	〃			
	172	140	W	1	K	166			
	〃	〃	W	2	M	〃			
	220	120	W	2	M	167			
			F	2	U				
	225	90	W	2	M	168			
	〃	〃	W	1	K	〃			
			F	4	U				
			F	3	M				
			F	4	M				
			F	1	U				
	270	140	W	3	M	169			
	170	200	W	2	U	170			
	230	200	W	7	U	171			
	160	200	W	7	U	172			
	230	70	W	2	M	173			
	160	200	W	2	M	174			
	260	50	W	2	M	174			

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

303

This sheet is used as:
○ Corrections to auto data capture,
or ○ Manual record of observations

Transect _____ Date 7/7/202

Vessel FOG LARO Page 5 of 6 Recorder WFS

Obsrvr 1 MDK Weather 1

Only observer, or left observer of 2-person team (0) >50 CC (1) <50 CC (2) Fog (3) Mist (4) Rain

Obsrvr 2 STH Visibility (m) 1

Right observer of a 2-person team (1) < 500m (2) 250-500m (3) > 250m

Start | end _____ | Beaufort 2

In Alaska Daylight Time (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	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
	170	70	W	2	M	175			
	205	80	W	1	M	176			
	170	120	W	5	M	177			
	"	"	W	2	U	"			
	184	105	W	1	U	178			
	165	40	W	2	M	179			
	235	240	W	9	U	188			
	175	80	W	1	M	181			
	"	"	W	1	U	"			
	220	130	W	2	M	182			
	165	170	W	10	U	183			
	240	230	W	8	M	184			
			F	3	M				
	160	180	W	"	M	185			
	175	80	W	2	M	186			
	270	120	W	1	M	187			
	"	"	W	1	U	"			
	179	180	W	3	U	189			
	210	105	W	2	M	189			
	180	150	W	4	M	190			
	270	150	W	4	M	191			
	"	"	W	10	U	"			
	165	145	W	2	U	192			
	260	140	W	2	U	193			

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 303
Vessel FOG ~~CAPE~~ Page 6 of 6
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 STH
Right observer of a 2-person team
Start | end 14:01 14:53
In Alaska Daylight Time

Date 7/7/2012
Recorder WFS
Weather 1 3@WP206
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1 2@WP206
(1) >500m (2) 250-500m (3) <250m
Beaufort 1
(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	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
	90	120	W	2	M	194			
	240	160	W	7	U	195			
	160	130	W	2	M	196			
	"	"	W	3	U	"			
	240	80	W	1	M	197			
	184	100	W	18	M	198			
	245	160	W	12	M	199			
	188	50	W	1	K	200			
	182	60	W	3	M	201			
	256	85	W	2	M	202			
	195	150	W	1	M	203			
	180	200	W	2	U	204			
	135	220	W	1	U	205			
			F	1	M				
			F	1	M				
	RECORDING APPLICATION						EXPOSED	TOO	
	EXACTLY, SO PAPER						AND GA		
	WAYPOINTS WERE						ATTENTIVE.		
	THIS TRANSECT					WAS DONE		UNDER	
	PROPER OPERATIONS						AM	7/14/2012.	

Record key is present only for correction to automated entries.

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

SEE NOTE ON FINAL PAGE

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
○ Corrections to auto data capture,
or ⊗ Manual record of observations

Transect 304
Vessel FOG CAPE Page 1 of 2
Obsrvr 1 MOK
Only observer, or left observer of 2-person team
Obsrvr 2 SKH
Right observer of a 2-person team
Start | end 15:30 15:50 |
In Alaska Daylight Time

Date 7/7/2012
Recorder WAS
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) >500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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	Start				208			
	Transect	End				232			
	180	200	F	1	K	210			
	205	200	W	1	U	211			
	165	40	W	1	M	212			
			F	2	M				
	200	250	W	1	U	213			
	140	180	F	1	M	214			
	190	150	W	1	U	215			
	150	150	W	2	M	216			
	120	70	W	2	M	217			
	170	200	F	1	M	218			
	150	10	F	1	M	219			
	180	20	W	2	M	220			
	200	100	W	3	M	221			
	240	120	W	2	U	222			
	110	100	W	2	U	223			
			F	4	U				
	240	90	W	2	M	224			
	170	150	W	2	U	225			
	215	120	W	2	M	226			
	150	60	W	1	K	227			
	185	110	W	2	M	228			
	187	150	W	1	M	229			

Record key is present only for correction to automated entries.

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

W 1 U

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:
○ Corrections to auto data capture,
or ⊗ Manual record of observations

Transect 304
Vessel FOX CARE Page 2 of 2
Obsrvr 1 MDK
Only observer, or left observer of 2-person team
Obsrvr 2 ST 4
Right observer of a 2-person team
Start | end 15:30 15:50 |
In Alaska Daylight Time

Date 7/7/2012
Recorder CW FD
Weather 3
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
Visibility (m) 1
(1) > 500m (2) 250-500m (3) < 250m
Beaufort 2
(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	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
	195	195	W	1	M	230			
	"	"	W	1	U	"			
	190	200	W	1	U	231			
	200	190	W	1	M	232			
	"	"	W	2	U	"			
	RECORDED APPLICATION ERRATIC FAULT,								
	PAPER AND GPS WAYPOINTS USED								
	ATTEMPTED.								
	THIS TRANSECT WAS REDONE UNDER								
	PROPER OPERATIONS ON 7/14/2012.								

Record key is present only for correction to automated entries.

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