

Preface to 2024 KM_B field observer forms

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

1. Because frequency of observations can be high, corrections called in for observations already saved – even a few seconds previously – often cannot be edited immediately, as this would require pausing survey operations. Instead, the observation's sequence number and associated corrections are noted on the field observer form. Corrections are applied upon completing the transect or, if necessary, during post-survey quality control.
2. Check marks on the field observer form denote corrections applied in the field, which appear in the deliverable KM_C: Raw Observations.
3. Post-survey corrections (e.g., erasing a tracklog that was accidentally initiated when nowhere near a transect) are annotated with "QC" on the field observer form. These corrections are applied during quality control to KM_D: Corrected Observations intermediate product, and ultimately, in the deliverable KM_E: Cumulative Observation Database, but not to KM_C.
4. July 15: Transect 025 was terminated approximately 560 meters prematurely because of brash ice.
5. July 9: Transect 310 was terminated approximately 2600 meters prematurely because Beaufort sea state increased to 3.
6. July 10: Transect 312 was not sampled because of Beaufort sea state 3 on the entire transect. Schedule constraints did not allow returning to sample this transect.
7. July 10: Beaufort sea state 3 on the first part of Transect 012 exceeded sampling limits. We sampled this transect because we were unlikely to return to this location and because sea state decreased further along the transect. Beaufort sea state dropped from 3 to 2 on the first transect leg. Data prior this drop should be censored.
8. Transect 301 was not sampled because of schedule constraints.
9. July 16: Several transects from Beardslee Entrance south saw unprecedented murrelet densities, primarily marbled. Observations on Transect 001 recorded 268 murrelets/km (almost twice that of any prior transect), and 280 to 530 murrelets/km (the latter value representing an average of 1 murrelet recorded every $\frac{3}{4}$ second over 8.5 minutes) were recorded on nearshore sections of Transects 302, 303, and 305. Murrelets were not in groups or lines, but were loosely aggregated across the transect width, with many foraging. Observations out of necessity grouped large numbers of unidentified murrelets; observers prioritized quickly counting murrelets versus time-consuming species identification. Observers grouped murrelets by their location relative to the transect centerline (i.e., near the centerline, further away from the centerline on the port or starboard, etc.). An unknown number of murrelets detected at larger perpendicular distances from the transect centerline went unrecorded due to insufficient time. Similar murrelet densities were observed in these areas during pre-survey training on July 8.
10. July 15: At the north end of Transect 022 on southwest side of Russell Island at about 17:15, STH observed a lone, fish-carrying marbled murrelet flying northwest along the island's shoreline. Marbled murrelets are not known to have been observed holding/carrying fish for nestlings so far into the upper fjords. The observation suggests local nesting, perhaps on cliff ledges.
11. Murreleteers for 2024 survey: Allison R. Tuttle (ART; observer, data recorder), Steven T. Hoekman (STH; observer), Lisa V. Docken (LVD; observer, data recorder), Jamie N. Womble (JNW; observer, data recorder), Thomas R. Ziomek (TRZ; data recorder), Justin G. Smith (JGS; vessel captain, R/V Capelin).
12. 2024 Survey Dates: July 8-11 and July 15-16.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

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

Transect 001

Date July 16, 2024

Vessel Capelin Page 1 of 1

Recorder ART

Observer 1 LVD

Weather /

(Only observer, or left observer of 2-person team)

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

Observer 2 STH

Visibility (m)

Right observer of a 2-person team

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

Start | end 1:45 pm / 2:08 PM

Beaufort 100

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

[illegible]

Record key is present only for correction to automated entries.

KJMU 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

In Alaska Daylight Time

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06



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

Date 11-JUL-24

Recorder TRZ

Weather /

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

Visibility (m) 1

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

Beaufort 1

In Alaska Daylight Time

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

Record key is present only for correction to automated entries.

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 005

Date 11-JUL-24

Vessel CAPELIN Page 1 of 1

Recorder TRZ

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 LVD

Visibility (m) 1

Right observer of a 2-person team

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

Start | end 1359 1459

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

[illegible]

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 11-JUL-24

Recorder LVD

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

[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 007

Vessel CAPELIN Page 1 of 1

Observer 1 STH

Only observer, or left observer of 2-person team

Obsvr 2 LVD

Right observer of a 2-person team

Start | end 11/3 12/3

In Alaska Daylight Time

Date 11-JUL-24

Recorder TRZ

Weather _____

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

Visibility (m) _____

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

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

[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.



SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

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

Transect 008

Vessel CAPELIN Page 1 of 1

Obsrvr 1 STH

Only observer, or left observer of 2-person team

Obsvr 2 ART

Right observer of a 2-person team

Start | end 0956 1101

In Alaska Daylight Time

Date 11-JUL-24

Recorder LVD

Weather 1

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

Visibility (m) 1

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

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

[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]

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

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

Transect 010

Date 10-JUL-24

Vessel CAPELIN Page 1 of 1

Recorder JNW

Obsrvr 1 STH

Weather 2

Only observer, or left observer of 2-person team

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

Observer 2 ART

Visibility (m)

Right observer of a 2-person team

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

Start | end 1054 1120

Beaufort 6

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

[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 10-JUL-24

Recorder TRZ

Weather /

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

Visibility (m) 1000

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

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

[illegible]

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 012

Date 10-JUL-24

Vessel CAPELIN Page 1 of 1

Recorder TRZ

Observer 1 STH

Weather _____ / _____

Only observer, or left observer of 2-person team

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

Obsrvr 2 LVD

Visibility (m) _____

Start | end 1533 1611

Beaufort 3

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

[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

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.

SEAN KITTLITZ'S MURRELET OBSERVER FORM

This sheet is used as:

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

Transect 014

Date 09-JUL-24

Vessel CAPELIN Page 1 of 1

Recorder TR7

Obsrvr 1 *STH*

Weather

Obsvr 2 ART

	(d) <50 °C
Visibility (m)	/

Right observer of a 2-person team

Start | end 1007 1022

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

[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 09-JUL-24

Recorder TRZ

Weather /

Visibility (m) 1

Beaufort 0

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

Right observer of a 2-person team

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

In Alaska Daylight Time

(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 09-JUL-24

Recorder TRZ

Weather 1

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

Visibility (m) 1

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

Beaufort 0

(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

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

[illegible]

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06



☒ 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.

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



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

Date July 15, 2024

Recorder ART

Weather /

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

Visibility (m)	100-1500 (1)	50-100 (2)	10-50 (3)	1-10 (4)	Rain
100-1500	0.0000	0.0000	0.0000	0.0000	0.0000
50-100	0.0000	0.0000	0.0000	0.0000	0.0000
10-50	0.0000	0.0000	0.0000	0.0000	0.0000
1-10	0.0000	0.0000	0.0000	0.0000	0.0000
Rain	0.0000	0.0000	0.0000	0.0000	0.0000

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

Beaufort 0

(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 July 15, 2024
Recorder ART
Weather 1
(0) <50 CC (1) >50 CC (2) Fog (3) Mist (4) Rain
ibility (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

[illegible]

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.

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



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

Date July 15/24

Recorder LVD

Weather 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

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



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

Date July 16, 2024

Recorder LVD

Weather _____

Visibility (m) _____

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

[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

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 08-JUL-24

Recorder TRZ

Weather 1

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

bility (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

[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 305

Vessel Capelin Page 1 of 1

Obsrvr 1 LVD

Obsrvr 2 STH
Only observer, or left observer of 2-person team

Start | end 2:19 PM / 3:06 PM
In Alaska Daylight Time

Date July 16, 2024

Recorder ART

Weather /

Visibility (m) /

Beaufort 1 → 2

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

Beaufort 1
(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 08-JUL-24

Recorder TRZ

Weather 1

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

Beaufort 1
(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

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

[illegible]

KIMU OBSERVER FORM.DOCX REVISED 2012-06-06



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

Date 08-JUL-24
Recorder TRZ
Weather I
visibility (m) I
Beaufort I
(0) Calm (1) 1-20 cm (2) 20-50 cm (3) 0.5-1 m (4) 1-2 m

QC - A gap in GPS occurs between 12:36:52 and 12:37:30. Observation record 201 was made during this range, and should be graded as 4.

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



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

Date 09-JUL-24

Recorder TRZ

Weather 3

Only observer, or left observer of 2-person team

Visibility (m) 1

Right observer of a 2-person team

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

[illegible]

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

(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 10-JUL-24

Recorder LVD

Weather 1

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

Visibility (m) _____

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

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

[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 09-JUL-24

Recorder TRZ

Weather 3

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

Visibility (m) _____

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

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

[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

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

[illegible]

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

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.



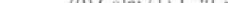
☒ Corrections to auto data capture,
or ☐ Manual record of observations

(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

Beaufort 

[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 320

Vessel Capelin Page 1 of 1

Obsrvr 1 STH

Only observer, or left observer of 2-person team

Obsrvr 2 ART

Right observer of a 2-person team

Start | end 3:40 PM | 3:58 PM
In Alaska Daylight Time

Date July 15, 2024

Recorder LVD

Weather 1

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

Visibility (m) 1

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

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

[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 July 15, 2024

Recorder ART

Weather 4

Only observer, or left observer of 2-person team

Visibility (m) 1

Right observer of a 2-person team

Beaufort 0

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

[illegible]

Record key is present only for correction to automated entries.

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