MARBLED MURRELET FOREST SURVEY FORM

Total Detections: _____

Species of Concern Y / N (circle one; details on last page)

State/Province (circle) AK BC WA OR CA

Month _____ Day _____ Year _____

Ownership: _____

Area Name: _____ Stratum Name/Number: _____ Station Number: _____ _____ ___

Observer (s) Name: _____ Initials: _____ Affiliation: _____ Phone: (_____)_____

Station Location: - UTM zone: _____ E (x) coordinate: _____ N (y) coordinate: _____

Source: _____ Datum: _____ Accuracy: _____

Official Sunrise Time: _____ Source: _____ Begin Survey Time: _____ End Survey Time: _____

ENVIRONMENTAL CONDITIONS:

revised: 12 / 2020

| Time | Vertical Viewing | | | Horiz. Vis. to 100m (Y/N/U) | Audibility to 200m (Y/N) | Precipitation | | | Wind | Noise | Notes — Remember to record duration of any conditions that affect survey validity |
	Ceiling	Cloud Cover	Visibility to 1x Canopy			Rain	Fog	Other			

- **Ceiling: UL** Unlimited (clear); **HI** > 2.0 canopy height; **MID** > 1.5 to < 2.0 canopy height; **LO** >1.0 to <1.5 canopy height; **SUB** < 1.0 canopy height; U = Unknown (too dark to see)
- **Cloud Cover: 0** = 0%, **1** = 33%, **2** = 66%, **3** = 100%.
- **Vertical Visibility: N** = Impaired (detections may be missed due to conditions), **Y** = Unimpaired (conditions allow for reliable detection), **U** = Unknown.
- **Horizontal Visibility: N** = Impaired (detections may be missed due to conditions), **Y** = Unimpaired (conditions allow for reliable detection), **U** = Unknown.
- **Audibility: N** = Impaired (detections may be missed due to conditions), **Y** = Unimpaired (conditions allow for reliable detection).
- **Precipitation - Rain & Fog: N** = None, **L** = Light, **M** = Moderate, **H** = Heavy. **Other: H** = Hail, **S** = Snow. (Indicate intensity using same codes for rain & fog).
- **Wind: 0** = <1 mph (calm), **1** = 1-3 mph (leaves barely move), **2** = 4-7 mph (leaves rustle, sm. twigs move), **3** = 8-12 mph (leaves & sm. twigs in constant motion), **4** = 13-18 mph (sm. branches move), **5** = 19-24 mph (lg. branches & sm. trees start to sway), **6** = 25-31 mph (lg. branches in constant motion), **7** = 32-38 mph (whole trees move), **8** = 39-46 mph (twigs & sm. branches break).
- **Noise: N** = None, **A** = Aircraft, **B** = Bird song/calls, **C** = Creek/water drainage, **M** = Machinery, **P** = Rain/hail, **T** = Tree drip, **V** = Vehicle, **W** = Wind, = Other (explain in Notes).

Protocol Review

☐ Survey began on time (at least 45 minutes before sunrise)

☐ Survey continued uninterrupted for at least 2 hours

☐ Vertical visibility to 1-canopy height was not impeded for >12 minutes

☐ Horizontal visibility to 100m was not impeded for >12 minutes

☐ Audibility to 200m was not impeded for >12 minutes

Survey Visit to Protocol?: (circle one)   Yes / No

Protocol Reviewer Name_____

Protocol Reviewer Affiliation: _____

Protocol Review Date _____

MARBLED MURRELET FOREST SURVEY FORM

Area Name _____

Page _____ of _____

Observer (s) Initials: _____

Stratum Name /No:_____

Detections - This Side Page Total: _____

Units of Measure (circle one): U.S. / Metric

Station Number: _____

Month _____ Day _____ Year _____

SURVEY ACYIVITY: *Note Significant Weather Changes on Page 1*

Detection #	Detection Time	Initial Detection Direction	Initial Distance to Birds Seen	Type	Auditory				# Birds Seen	Behavior	Initial Flight Direction	Bird Height Seen	Closest Distance to Birds Seen	Closest Distance to Birds Heard (Loudness) L = Loud: 0-50m M = Moderate: >50-150m F=Faint: >150m	Depart Flight Direction	Final Detection Direction	Notes
					Vocal Series	Other	Overlap ping										
					K#/M	Other Voc	W/J	Y/N									
																	Start

Detection #	Additional Notes

TYPE: **H**eard; **S**een; **B**oth heard and seen; — BEHAVIOR: **F**lyover above canopy (straight flight); **C**ircling (or arcing) above canopy; **B**elow-canopy (straight flight); **T**hrough (at or below-canopy) flight; **U**nknown