## MARBLED MURRELET FOREST SURVEY FORM

**Survey Visit to Protocol Page 1 of _____**

(Y or N, initials): __________ Total Detections: _______

Species of Concern (circle one, details on last pg.): Y or N

Month ____________ Day ________ Year ________

Area Name: ______________________ Site Name / Number: __________________

Station Number: ____________

Sta. Location - UTM zone: _____ E (x) coordinate: ________ N (y) coordinate: ________

Source: ________ Datum: ________ FOM: ______

Observer(s) Name: ______________________ Initials: ________

Affiliation: ______________________

Phone: (____)_______________

Station Elevation: ________ Ft / M

Position on Slope (circle one): Bottom/plain, Lower 1/3, Mid 1/3, Upper 1/3, Ridgetop

Station Placement (circle one): Inside, Outside

Distance from Survey Site Boundary: ____________

Units of Measure for ALL Horizontal Distances: ____________

Station Canopy Cover (circle one): 1 = 0 to 25%, 2 = 26 to 50%, 3 = 51 to 75%, 4 = 76 to 100% Canopy Height ____________

### ENVIRONMENTAL CONDITIONS:

**Official Sunrise Time:** ____________ **Source:** ____________

**Begin Survey Time:** ____________ **End Survey Time:** ____________

**Temperature at Sunrise:** ____________ **Temperature at End of Survey:** ________ (circle one) C or F

**NOTES**

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<table>
<thead>
<tr>
<th>TIME</th>
<th>VERTICAL VIEWING</th>
<th>HORIZ. TO 200 M</th>
<th>AUDIBILITY TO 100 M</th>
<th>PRECIPITATION</th>
<th>WIND</th>
<th>NOISE</th>
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</thead>
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<tr>
<td></td>
<td>CLOUD COVER</td>
<td>VISIBILITY TO 2 CANOPY</td>
<td>VISIBILITY TO 100 M</td>
<td>AUDIBILITY</td>
<td>RAIN</td>
<td>FOG</td>
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<tr>
<td></td>
<td>0 = &lt;1 mph (calm), 1 = 1-3 mph (leaves barely move), 2 = 4-7 mph (leaves rustle, sm. twigs move), 3 = 8-12 mph (leaves &amp; sm. twigs in constant motion), 4 = 13-18 mph (sm. branches move), 5 = 19-24 mph (lg. branches &amp; 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 &amp; sm. branches break)</td>
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<td></td>
<td>0% = None, 1 = Aircraft, 2 = Bird song/calls, 3 = Creek/water drainage, 4 = Machinery, 5 = Rain/hail, 6 = Tree drip, 7 = Vehicle, 8 = Wind, O = Other (explain in Notes)</td>
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</table>

Ceiling: UL = Unlimited (clear), HI = >2.0 canopy height, MID = >1.25 to ≤ 2.0 canopy height, LO = ≤1.25 canopy height, U = Unknown.

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, O = Other (explain in Notes).

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**Occurrence No. __________ Data Point No. ___________ Sequence No. ___________ Reference No. ___________**

**Quad. Code ____________ Photo Code _____________ General Location _____________________________________**

**Data Entry Initials _________ Data Entry Date ___________ Data QC Initials ___________ Data QC Date ___________**

**Protocol Review Initials __________ Review Date ___________ Highest Biological Status ___________**

**CDFG DATABASE USE ONLY**
### CALIFORNIA MARBLED MURRELET FOREST SURVEY FORM

**SURVEY ACTIVITY:**

**Note Significant Weather Changes on Page 1**

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<th>DETECTION TIME</th>
<th>INITIAL DETECTION DIRECTION</th>
<th>AUDITORY</th>
<th># BIRDS SEEN</th>
<th>BEHAVIOR</th>
<th>INITIAL FLIGHT DIRECTION</th>
<th>BIRD HEIGHT SEEN</th>
<th>CLOSEST DIST. TO BIRDS</th>
<th>DEPART FLIGHT DIRECTION</th>
<th>FINAL DETECTION DIRECTION</th>
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**TYPE:**

- **H** = Heard Only (no visual), **S** = Seen Only (silent), **B** = Both Seen and Heard.

**AUDITORY - Vocal Series** (Vocalizations):

- **K** = KEER calls,
- **G** = Groan (alternate) calls,
- **O** = Whistle or Soft Que calls,
- **U** = Unknown, 
- **---** = None or N/A. Indicate the vocal type heard at both the start and end if calls grade between different types during the detection. Indicate the number heard 1-5 or **M** = Multiple. **OL** = Overlapping Vocalizations (Y or N).

**AUDITORY - Other** (Non-Vocal Sounds):

- **W** = Wing Sound,
- **J** = Jet Sound, 
- **---** = None or N/A. If both are heard write W / J.

**BEHAVIOR:**

- **F** = Flight Over Canopy,
- **C** = Circle Over Canopy,
- **T** = Fly-Through At or Below Canopy (≤ 1.0),
- **B** = Circle At or Below Canopy (≤ 1.0),
- **L** = Seen Landing in or Departing From a Tree,
- **S** = Stationary Calling (fixed-point multiple calls <100 m), **U** = Unknown.

*(Check Reverse Side When Using 2-Sided Forms)*
**Note Significant Weather Changes on Page 1**

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<th>AUDITORY - Other</th>
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**Auditory - Other (Non-Vocal Sounds):**
- **W** = Wing Sound,
- **J** = Jet Sound,
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**Behavior:**
- **F** = Flight Over Canopy,
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