

## Long-billed Curlew Survey Protocol: Mission Valley Area

This volunteer survey effort marks our 9<sup>th</sup> year of surveying curlews as a team! Thanks for your continued support of this project! This protocol together with route maps, data forms, and more are available here: [missionvalleycurlews.weebly.com/mission-valley](http://missionvalleycurlews.weebly.com/mission-valley). You can even download an app to make data collection easy! Together with Montana Natural Heritage Program and Montana Fish, Wildlife & Parks, we have designed an ArcGIS application just for the Long-billed Curlew project. Just use the above and navigate to our-billed Curlew Survey Resources page.

This year, we will again have two survey windows available. Ideally every route will be run at least once within a survey window. Window 1 is April 15<sup>th</sup> – May 7<sup>th</sup>, and window 2 is May 8<sup>th</sup> – May 31<sup>st</sup>. We are also asking you to record any Sandhill Cranes that you see.

### How it works:

- ✓ Find your route(s) via the above website (or from Carmen or Peter)
- ✓ Survey between April 8 and May 31.
- ✓ Survey anytime between just after sunrise and ~ noon, *a little longer if temperatures remain cool.*
- ✓ Do not conduct surveys in the following weather conditions:
  - Temperature ~85°F
  - Consistent wind speed >20 mph; note effects of higher winds on counts under count quality.
  - Fog or precipitation that reduces visibility to ~ <125 meters.
- ✓ Sample ~ 10 locations, ½ mile or 800-m apart along primary or secondary roads. Try for at least 6 points, but as many as you can get in given the route and time.
- ✓ Use a car odometer to measure between points. Or if you know how to use GPS, use the points provided on the map (also provided), or you can use the map and with your GPS create a waypoint at first stop and then use GPS to “find – nearest waypoint” and travel away for ~800m.
- ✓ **We would like to get some approximate spatial location for each curlew found.** You may be able to describe just where (especially if it is close to your survey point), but better would be to pencil or mark on the map provided (please mark clearly!) and return these maps to us.
- ✓ Also – please take photos of your survey team, curlews or anything else.

### At each survey stop location and on accompanying form:

- Record the Route and stop number information. Route Name will be provided; stop is 1 – 10 (or more if you chose to extend).
- Record the count quality (*see below*) at each stop.
- If you have GPS, write down latitude/long WGS 84 (e.g. 44.45494, -114. 54935). If doing many routes and you know how to create a GPS waypoint you can download the lat/longs from your unit after. Label carefully!
- If no GPS please carefully mark a map!
- Record the start time of each survey stop.
- Record any curlews that flush on arrival and make note that they flew upon arrival.
- Conduct a 5-minute survey. Stand in one place and scan with binoculars to locate birds, use spotting scope if you have one to confirm sightings.
- Record each bird one time only. For each bird observed:
  - Record how you detected the bird under How detect?: **V** – visual, **C** – calling, **F** - flyover
  - Record the approximate distance (meters) to each **curlew or group of curlews**. Don't worry if it is just a guess. A distance and a direction are required for all curlew observations except Flyovers (marked as F).
  - Record the total number of birds in the group. Group is defined as an aggregation of more than one bird

(over)

- **Please – if at all possible, mark your birds on the map provided** – pencil them in as best you can!
- For each **curlew or group of curlews** observed record **dominant land use/habitat** within an ~ 100-m radius of where you found the curlew(s).
- If you detect Curlews **between points or before/after** the 5 minute count, add to the closest point and add any relevant detail (where found and distance from you).
- Feel free to give us as much detail as you can for each point and overall survey effort!

**Count Quality: TO BE ENTERED AT EACH STOP**

E – Excellent – quiet, good visibility, no wind, not interrupted by traffic, temperatures not too hot or cold

M – Moderate – light disturbance (wind, traffic, other noise), cold (< 32F or hot (> 75 F)

P – Poor – hard to hear or see for some reason, really cold or hot or wet!

**Dominant Land Use**

R – Rangeland/grassland; C – Cropland; S – Sagebrush steppe; O – Other (residential, forest – please describe)

**Sample Data for one stop:**

**STOP 1:** start time: 6:35 Marked map: yes no. Lat: 44 . 59815 long - 114 . 69844 Way point? no  
**Curlews:** NO YES (circle one). If yes, numbers of curlews, distance to each individual or group, if flyover only, and how detected (Visual, Call, Both), and dominant cover (if you can): R, C, S O.

1 pair. 50 meters, north side of road. Detected via V - visual. Pecking around in R (rangeland). See marked map!

1 individual – Flyover – 300 meters to the south (flew east to west)

If YES, **Count Quality:** Excellent Medium Low (circle one). Breezy but no big gusts. Two cars drove by during the stop.

**Sandhill Cranes Y/N?** N Number: 0

**Return forms to:**

**Montana Audubon**

Peter Dudley, peter@mtaudubon.org or Carmen Borchelt, carmen@mtaudubon.org

Address: P.O Box 595 Helena, MT 59624