

Long-billed Curlew Survey Protocol: Mission Valley Area

This volunteer survey effort marks our 10th 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. 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.

How it works:

- ✓ Find your route(s) via the above website
 - ✓ 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.
 - ✓ If you know how to use GPS, you should import the given GPS points for your route in a GPS software. This works for OnX, Google Maps (through a custom map,) and on Gaia GPS. You can also use a car odometer, although this is not preferred.
 - ✓ 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 # will be provided; stop is 1 – 15.
- **Record the start time** of each survey stop
- **Record** your **stop location** on the provided **road map!**
- **Record** the **count quality** at each stop.
- **Record** the **Dominant land use** (*see below*) at each stop, and for each **curlew or group of curlews** observed record **dominant land use** within ~ 200-m radius of the point.
- **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 species comments: **V** – visual, **C** – calling, **F** - flyover
 - Record the approximate distance (meters) to each **curlew or group of curlews**. A general distance is required for all curlew observations except Flyovers (this does not need to be perfect.)
 - Record the total number of birds in the group. Group is defined as an aggregation of more than one bird
- 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).⌘