

Human Observer Point Count Protocol

Where to do the point count surveys?

- All point count surveys will be conducted at the same location where the ARU is deployed on that site.

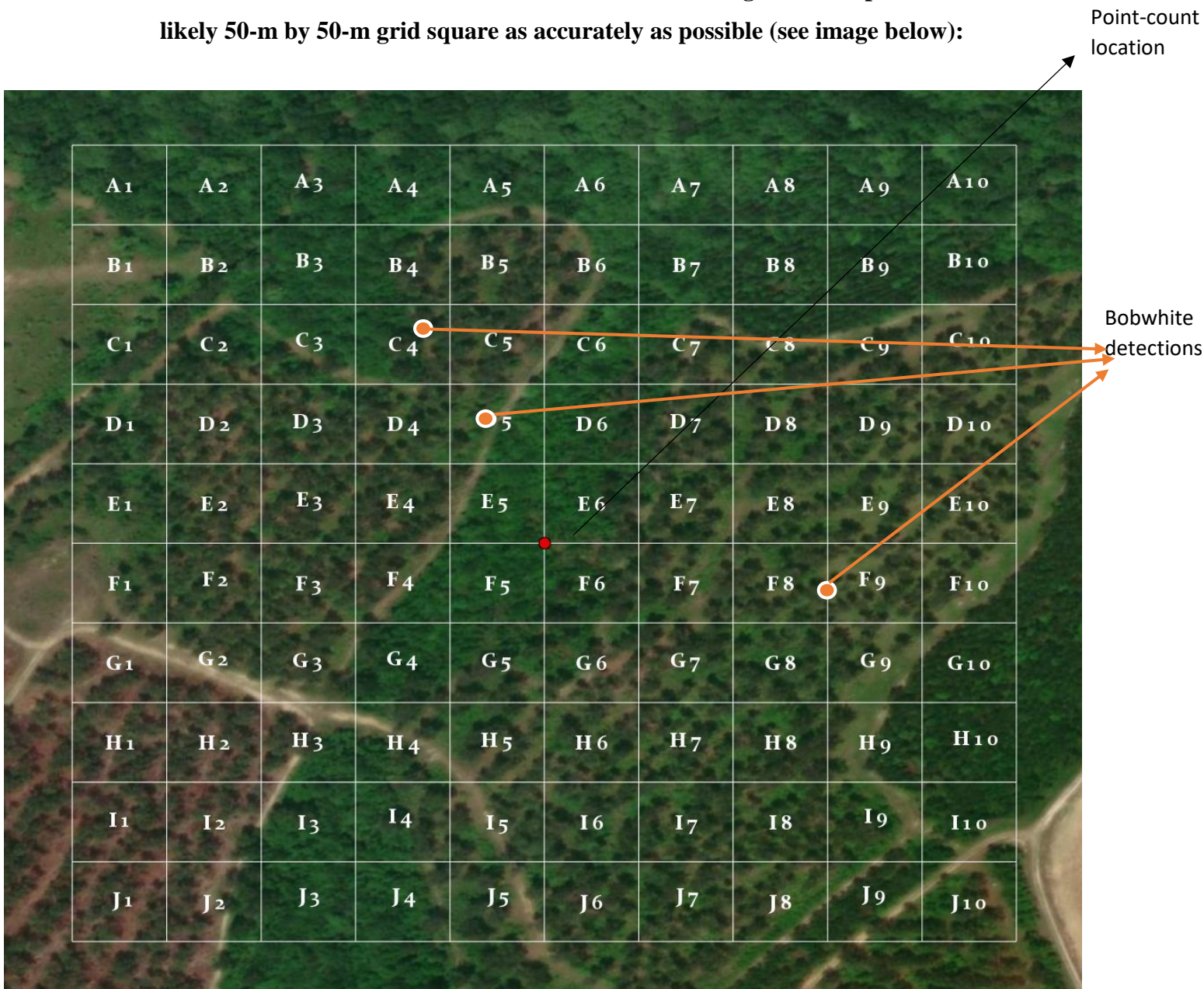
When should point counts be conducted?

1. **Between 30 minutes prior to sunrise until 3 hours 30 minutes** - Check your local newspaper for the time of sunrise or visit calculate the sunrise time nearest to the point using: http://aa.usno.navy.mil/data/docs/RS_OneDay.php
2. **During ARU recording periods** - all point count surveys should be conducted during the same time in which the ARU at that site is recording to allow for comparison. Conduct a survey before you deploy the ARU and before the ARU is removed from the site to avoid disturbance before a survey is conducted.
3. **Only under optimum weather conditions** - Counts should only be conducted under optimum weather conditions (with no heavy fog (<200m visibility), steady rain, unusually cold, or high wind (>20 km/h)). If the human hearing is impeded by the wind or bird activity is significantly reduced by weather, then try to return on a day of better weather.

How to conduct the point count survey?

- **For each point-count survey, you will be provided with a datasheet to print out before the survey. This sheet contains two items to be completed:**
 - 1) **A table for recording bobwhite observations and environmental factors**
 - 2) **A gridded map of 500-m by 500-m split into 50-m by 50-m grid cells on which any bobwhite detected should be recorded as accurately as possible.**
- The observer will arrive at the point count location at a time that meets all of the above three specified criteria.

- Observers will wait for 5 minutes before commencing their point count observations to reduce the impact of their arrival and disturbance.
- The point count observation will then be carried out for an exact total of 5 minutes.
- Observers should listen in all directions for bobwhite and record the estimated distance and direction of any visual or audio detections of bobwhite.
- **All detections should be marked on the 500-m x 500-m gridded map within the most likely 50-m by 50-m grid square as accurately as possible (see image below):**



- **All other observations should be recorded in the table (see example datasheet)**

When should a point count survey location be revisited for resampling?

- Aim to sample all point count locations 1-3 times throughout the field season from the 15th of May – 15th of July.
- To ensure capturing of variation in calling rates and increasing chances of capturing peak, allow 7 days to pass before resampling points.
- Follow the exact same protocol for the surveys at each visit to the site.

What data should be collected at each point and recorded on the survey form?

Bird Detected and ID: Each detected bobwhite should be recorded once and given a unique bird ID (1, 2, 3 etc...). In the 'Bird Seen?' column record whether the individual bird was seen or heard the time of *first detection*. There is no need to record whether you heard or saw the same bird at a later time at the same survey point.

Time Interval (Minute Recording): Time intervals should be recorded as the nearest whole number a bird is heard in. For example, if you hear a bobwhite at 2:23 into the survey (during the 3rd minute), record a '3' in the 'Minute' column of the data sheet. All birds first detected in the first interval will be excluded (removed) from subsequent time intervals. Only record **new** birds in any interval. For example, if one individual is seen/heard in the first minute, and that same individual is heard in the 3rd minute, **do not re-record** that individual on the second observation.

A. Intervals: 0-1min, 1-2min, 2-3min, 3-4min, 4-5min

Cloud Cover: This should be recorded to the nearest whole 5%. Do not include decimals. To improve consistency, everyone should be providing an estimate from the entire visible sky, not just what is immediately above.

Temperature: Try to record the actual temperature at the time of survey for example by using the car thermometer, phone or local weather information.

Wind Speed: This should be recorded using methods similar to the Beaufort wind scale with code values of: **0** = 0 mph, smoke rises vertically; **1** = 1-3 mph; **2** = 4-7 mph; **3** = 8-12 mph; **4** = 13-18 mph. It is acceptable to use the weather App on your smart phone to access local, real-time, weather conditions for wind speed. If you have a Kestrel, feel free to use it. However, be sure to record the Beaufort value rather than actual wind speed. **However, as mentioned before, if it is too windy/stormy or is raining, do not conduct the point count on that day.**

Disturbance: Noise levels at each point will need to be recorded. Record noise according to categories: 0 = silent, no noise interference; 1 = distant noise, but not interfering with count quality (i.e., a distant tractor or oil rig); 2 = difficult to hear clearly at times (i.e., intermittent traffic); 3 = constant noise, low quality count.

Distance: For individual birds you hear, or see, record a distance estimate to the nearest whole meter under the column labeled 'Distance'. If you estimate distances in the field using yards, please make the conversion before sending in your datasheet. Also please mark on the gridded map the location of the bird as closely as possible to where you think it might be.

Please see the attached example of the datasheet to collect and record the point count information.