Point Count Survey Standard Operating Procedures

Contact: David Tilson (david.tilson@uga.edu)

Focal Species

Nine target species will be included in the point count surveys. Surveyors should familiarize themselves with both the visual and auditory identification of all focal species *prior* to conducting surveys. Photos, descriptions, range maps, recordings of example vocalizations, and other identification resources can be search for here: https://www.allaboutbirds.org/. It is *imperative* that surveyors have a familiarity with the vocalizations of all focal species they may reasonably encounter (i.e., all focal species for which the point falls within the range of).

Species List & 4-letter AOU codes:

Northern Bobwhite – **NOBO**	Eastern Meadowlark – **EAME**
Western Meadowlark – **WEME**	Loggerhead Shrike – **LOSH**
Grasshopper Sparrow – **GRSP**	Bachman's Sparrow – **BACS**
Henslow's Sparrow – **HESP**	Field Sparrow – **FISP**
Dickcissel – **DICK**	

Survey Windows (Time of Year & Time of Day)

Surveys will take place from May 13 to July 12 during morning surveys. Valid survey windows are measured relative to sunrise. The 3-hour survey window starts 30 minutes before sunrise and ends 2 hours and 30 minutes after sunrise. [Note: ARUs should be set to record for the duration of this 3-hour window, not the 1-hour window used during the fall covey counts. Links to the ARU Deployment SOPs: Song Meter & AudioMoth.] Points may be surveyed anytime during this window. Check your weather app or click on the following link to search sunrise times for the closest city/town to your point: https://www.timeanddate.com/sun/.

Point Selection

Surveyors will need to coordinate with their in-state colleagues to ensure they reach their state's target number of points (see slides 10-12 on the WLFW Monitoring Design PowerPoint).

Historic Points

Continued monitoring at historic points should be prioritized. Landowners are not obligated to participate in continued monitoring, so surveyors should contact and re-request permission for monitoring. A list of points from continuing contracts should be emailed to David (see contact above) prior to May 1st along with your map requests for new points.

New Points

Surveyors must send their contract lists to David (instructions for pulling contract lists here) prior to March 29th. He will return a sorted list with the contracts assigned a random priority number grouped by practice-status (certified/planned) combos. [Note: duplicate contracts are removed and the practice-status combo for any one particular contract is selected at random

from those available for that contract. It is expected that some contracts will have more than a single practice type applied. We are only using one of the practices for the selection process, but the entire suite of practices will be used for analysis. It is possible that rarer practice-status combos are lost in the randomization process. If so, surveyors may pull that practice-status combo from the general EQIP list and send a list of just those combos for prioritization.]

Surveyors will contact landowners in the priority order for each practice-status combo to request monitoring access. Once the surveyors have gathered permissions, they must send back the priority order lists with the contracts that accepted highlighted or otherwise indicated. Additionally, send David <u>georeferenced</u> PDFs of each contract map for the highlighted contracts; <u>label the PDF files with the contract numbers</u>. [Note: if you are unable to provide georeferenced PDFs, please contact David for further instruction.] <u>The contract selection deadline is May 1st but send this back as soon as possible</u> to allow David ample time to return gridded maps before the start of surveys. Points will be selected at random within the selected practice of each contract.

<u>Point Selection for Point Counts</u>
ARU surveys are conducted at all points. Point count surveys should also be conducted at a minimum of 25% of all locations. New and historic points will be randomly prioritized to receive point count surveys. Surveyors with only a few contracts should do point counts at a minimum of 6 points (or at all points if # of points <6). Otherwise, surveyors *must* use the randomly prioritized lists to decide which points receive in-person counts. <u>It is **not** acceptable to select locations based on ease of access (e.g., points with shorter drive times) or based on suspected bobwhite presence (e.g., points with a higher suspected population)</u>. [Note: the priority column is only to help you select which locations will receive point counts. You need not survey the points in that specific order once point count locations are selected.]

Coordinating with ARU Deployment
Both ARU and point-count surveys are to be done 2-3 times (preferably 3 for most points) at each appropriate (see paragraph above) point with a minimum of 7 days between surveys. [Remember: ARUs are deployed at all selected locations, and point counts are conducted at a minimum of 25% of all locations.] ARU surveys last 5 days. To cover each site more than once, you will need to rotate the ARUs among sites. If you can't repeat ARU surveys at some sites, then extend the duration of the ARU survey on that site to 10 days (but always maintain at least 7 days between point count replicates).

Point counts should be conducted in tandem with an actively-recording ARU to allow for comparison and integration of the two data streams. To avoid disturbance before a survey, it is not recommended to conduct a point count immediately following ARU deployment. However, point counts may be conducted just prior to retrieval, provided that the survey is being conducted both within the survey window (i.e., during the right time of day relative to sunrise) and during appropriate weather conditions. It is up to the surveyors to plan ahead to ensure ARU rotations and the repeated point count visits coincide.

Weather Restrictions

Point counts should only be conducted during favorable weather conditions. Do *not* survey during periods with heavy fog (<200m visibility), rain, unusually cold temperatures, or high wind (>12mph). If observer hearing is impeded by wind or high background noise, or if bird activity is suspected to be significantly reduced by weather or human activities (e.g., chainsaws/tree felling in close proximity), please return on a day with better conditions.

Survey Methods & Guidelines

Surveyors will stand at pre-selected survey point coordinates where the ARU is recording.

For each point count, you will be provided two sheets to print out before the survey. These include:

1. A table sheet for recording environmental factors and all focal species observations (download blank datasheet here).
2. A grided map of the 500x500-m area centered around the survey point. This map is split into 50x50-m grid cells on which any focal species detected should be recorded as accurately as possible.

When you arrive at a point:

1. Surveyors should wait 5 minutes before starting their point count. Birds may not vocalize immediately after a human passes, so this 5-minute acclimation time is to reduce the impact of any potential disturbance caused when walking to the point.

    During this time, surveyors should ensure the environmental conditions are completed on the datasheet.

    a. Point ID, Observer Name, Survey Date, Coordinates, ARU ID, ARU Recording Start Date: Much of this information can be filled in prior to arriving at the point, but please take this time to ensure every field is complete and correct.
    b. Temperature: Please record the real-time temperature for the start of the survey by using a weather meter or checking the real-time temperature on your local weather app.
    c. Cloud Cover: This should be recorded to the nearest 5%. Do not include decimals or percentages other than multiples of five. For consistency, **provide an estimate for the entire visible sky**, *not* just what is directly above.
    d. Beaufort Code: Wind speed should be recorded using the Beaufort wind scale:

Beaufort #	Wind speed indicator(s)	Wind speed (mph)
0	Smoke rises vertically	0
1	Wind direction shown by smoke drift	1-3
2	Wind felt on face; leaves rustle	4-7
3	Leaves, small twigs in constant motion; light flag extended	8-12
4	Raises dust and loose paper; small branches are moved	13-18

If you have a weather meter, feel free to use it. Otherwise, check the real-time wind speed on your local weather app. **Be sure to record the Beaufort value rather than the actual wind speed.** As mentioned before, if it is too windy (>12mph), do not conduct the point count on that day (i.e., you should never be recording a Beaufort value of 4 or higher).

2. Begin the survey. After the 5-minute waiting period, surveyors may start the point count. During this time, detections of focal species are recorded for exactly 5 minutes. To easily track the time, surveyors should start the survey at the start of a new minute (e.g., the surveyor watches the time on their phone/watch and starts the survey exactly as the time changes from 6:04 to 6:05). Don't forget to record the survey start time! Any target species detected outside the time of the count and any distant birds that occur outside of the 500x500-m area surrounding the point should *not* be included in the data table (but may be included in the survey notes).

   Remember, you will be recording each individual bird on two separate pages:

   1. Bird observation table:
      a. Bird ID & Species: Each detected focal bird should be recorded on its own line in the table. The pre-filled "Bird ID" column will be used to mark bird locations on the gridded map. Fill in the 4-letter AOU code (see Focal Species above) in the "Species" column for each individual detected.
      b. Time of First Detection: Record the time of first detection for each individual focal bird detected. All birds first detected during a prior minute will be excluded ("removed") from subsequent time intervals. In other words, only record **new** birds. For example, if an individual is heard in the 1st minute, and that *same* individual is heard later during the 3rd minute, *do not re-record* anything for that bird related to the second detection in the 3rd minute.
      c. Distance: For individual birds you detect, record a distance estimation to the nearest whole meter.
      d. Seen/Heard: In this column record whether the individual bird was seen or heard at the time of *first detection*. If the bird was both seen *and* heard at the time of first detection, record "seen". Any further observations of these individuals are not recorded on a new line; however, you should keep mental track of individuals to avoid double counting them.
      e. Bird Notes & Survey Notes: These fields are optional, but please record detailed notes if you encounter unexpected problems that are not addressed in this SOP and/or that may affect data quality.

         Please keep these notes relevant to the survey and focal species. If you need to jot down things for personal reference (e.g., landowner

info, access info/directions), please do not include these notes in the online spreadsheet entries. Please do not include notes regarding non-target species *unless* there is reason to believe there is a direct impact on the target birds' behavior (e.g., avian predator hunting over survey area).

2. Gridded Map:
   a. All detections should be marked on the gridded map within the most likely 50x50-m grid square. Please mark the locations as accurately as possible. Label each mark with the number corresponding to the "Bird ID" column from the observation table. Additionally, please write the time of first detection (i.e., the same time listed in the "Time" column from the observation table) next to the Bird ID.

   [Note: for point-count surveys where no focal species are detected, please record all the site and environmental information, and write "no focal species detected" in the survey notes. Please include this note when entering your data into the data entry spreadsheet.]

3. At the conclusion of the survey, identify and record the level of background noise during the survey period. This step is easy to forget, so get in the habit of double checking.

   Background Noise Codes:
   0 – silent; no noise interference
   1 – distant noise, but not interfering with count quality (e.g., a distant tractor or oil rig)
   2 – difficult to hear clearly at times (e.g., intermittent traffic)
   3 – constant noise; low quality count

Repeat Visits (Resampling)
Survey all point count locations 2-3 times (preferably 3 for most points) throughout the field season (May 13th-July 12th). To account for seasonal variation in calling rates and to increase the chances of surveying during the peak season, allow a minimum of 7 days to pass before resampling points. Follow the same survey protocol (detailed above) during each resampling visit.

Data Entry
Each participating surveyor will have a OneDrive folder shared with them (contact David if you do not receive a link by May 13th). Data entry will occur there, and scanned copies of field datasheets will also be uploaded. ARU audio files will be uploaded to BirdLocale.

Please review the Data Management Guidelines in detail, even if this isn't your first year on the project! Data entry is the most important step of the entire monitoring process, so please pay high attention to detail.

Please see the attached example datasheet. Please reach out if you have any questions regarding this SOP.

Point Count Datasheet -
WLFW Northern Bobwhite & Grassland Birds Outcomes Assessments EXAMPLE

GEORGIA
Warnell School of
Forestry & Natural
Resources

Point ID: 1223	Observer Name: David Tilson	Survey Date: 05/20/2024	Start Time: 0605
Temperature °F 67	Cloud Cover % 45	Beaufort Code: 2	Noise Code: 1

Coordinates of survey location: **ARU ID**:   **ARU Recording Start Date**:

Bird ID	Species Code	Time of First Detection	Distance (m)	Seen/ Heard	Bird Notes
1	NOBO	0605	23	Seen	
2	FISP	0605	212	Heard	
3	NOBO	0606	107	Heard	
4	BACS	0608	47	Heard	
5	FISP	0608	70	Heard	
6	FISP	0608	85	Heard	
7					
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Survey Notes:

If no target birds are detected during the survey, please write "no focal species detected" and include this note when entering your data into the spreadsheet. All site and environmental information at the top of this sheet should be filled in regardless.

Beaufort Code: Wind Speed (mph)
0	0
1	1-3
2	4-7
3	8-12
4	13-18

Note: do not survey during wind code 4+ (>12mph).

Background Noise Codes:
0 – silent; no noise interference
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2 – difficult to hear clearly at times; intermittent noise
3 – constant noise; low quality count

Species Codes:
NOBO – Northern Bobwhite
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DICK – Dickcissel

Are all fields complete and legible? Double check! Triple check start time and noise code! Do not forget to mark all coveys on the table above *and* on the grided map.