



Standard Operating Procedure (SOP) 6:

Conducting Variable Circular Plot (VCP) Point Count Surveys V1.1

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Revision History Log

Prev. Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
1.0	Dec 2018	M. Dettling, D. Humple	Update hyperlinks, minor additions and grammatical changes	Clarity	1.1

This Standard Operating Procedure is available in digital format from [San Francisco Bay Area Network website](#) and the [NPS Data Store](#).

This Standard Operating Procedure explains the Point Blue Conservation Science procedures for conducting variable circular plot (VCP) point count surveys. We follow the guidelines established by Ralph et al. (1993) and detailed by Point Blue Conservation Science. Included herein are the two types of VCP forms used for this project.

Preparation and Equipment

See SOPs # 1 and #3 for equipment needed, scheduling crews, training, and preparing for point count season.

Daily timing and conditions of count

Counts begin approximately 15 minutes after local sunrise and should be completed within 4 hours, generally by 10AM. Prepare to arrive at your first point at the appropriate time. Do not conduct surveys during weather conditions that likely reduce detectability (e.g., high winds, rain, very dense fog). If conditions change for the worse while doing a count, remaining points can be completed within seven days from the first day, when logistically possible it may be preferable to redo the entire count.

Point count visits

We conduct two visits per season to each transect, with visits at least 10 days apart. Timing of the field season will vary by location, but should cover the local breeding season with as little overlap with migration or dispersal as possible. Here, the first visit is conducted in May and the second visit in June. When possible, the order in which points are surveyed should vary between visits, so before embarking on the second visit for any site be sure to determine the order the points were done initially. Efforts should be made to try to vary observers between visits to a transect.

Starting and timing your count

At the top of the form, fill out the state, region (county), point count station code, observer name and information, date, visit number, and page number. Approach the point with as little disturbance to the birds as possible, and begin your count as soon as you are oriented and are confident you can estimate distances accurately (less than 1 minute). During that period of orientation, you will want to estimate with a range finder the distances to a number of features around your point. This will increase your ability to place birds accurately within distance bands during the point. Record the point count number under the POINT # column. Point counts are five minutes duration at each point. Record the time the survey begins at each point using the 24-hour clock under the TIME column; record seconds as well if you are not starting at the exact minute, as your count needs to be *exactly* five minutes long. If something interferes with your ability to detect birds during the 5-minute count, stop the count until the disturbance has passed and start over. Cross out the interrupted data and note what happened on your form. After five minutes, do not record any new individuals or species detected (can report them in margins to enter into notes), and proceed to the next point.

Species detections

Every species detected at a point is recorded, regardless of how far from the observer. Use the standardized banding lab 4-letter abbreviation for species codes (<http://www.pwrc.usgs.gov/bbl/manual/bandsize.htm>) that follow the naming conventions maintained by the American Ornithologists Union <http://www.aou.org/checklist/north/>; Accessed: June 9, 2009). For unknown species, record "XXXX." For unknown members of various families, use "XX" plus two letters to signify the family (e.g., "XXHU" for unidentified hummingbird). You can follow birds after the completion of a point in order to verify identification. No attracting devices, recordings, or "pishing" should be used during the point, but you may use pishing to help identify a bird following the point. If no birds are detected at a point, write "No birds detected" on your form. For each point, one line of data is used for each species, with multiple individuals, if they occur, included on that line of data.

Distances of detections

For each individual detected we record the distance to the initial detection. Make every effort to avoid double counting individuals detected at a single point. However, if an individual is known or thought to have been counted at a previous point, record its presence at the current point anyway, while making a note of it being the same individual. For this project, we use the Variable Circular Plot (VCP) method in which the distance of each detection is recorded in the appropriate distance band. For this program, distance bins are 0-10 m, 10-20 m, 20-30 m, 30-50 m, 50-100 m, > 100m, and flyovers. If the bird subsequently moves, *do not change the original distance recorded*. The distance should be measured as though a tape were laid across the ground, that is, including any intervening topographic features. Birds that are flying over but not using the habitat on the study area are recorded in the fly-over column. Birds flying below canopy level, flying from one perch to another, actively foraging on or above the study area, or perched high in a tree are put in distance bands according to the distance from the point at which a plumb line would hit the ground if hung from the point at which the bird was first observed. A bird flushed from within 10m of the point when you arrive should be included in the count in the 0-10m band. Birds that are flushed from farther away should be noted on the margins of the form if they are species that didn't occur during the count.

Types of detections

We record the cue that alerted us to the presence of the individual: generally "S" for song, "V" for visual, or "C" for call, in that hierarchical order; (less common are also "D" for drumming woodpecker and "H" for humming hummingbird or wing whir of a dove or other species). If a bird is initially detected using two cues (for instance, you saw it and heard it call simultaneously), we give it the cue highest in the hierarchy (in that example you would indicate the bird with a V). Do not change the type of initial detection if you detect the bird in a different manner later. However, if a bird sings after it has been detected via a different cue, this is indicated in the data by circling the original detection cue (V, C, D or H) to note that a bird was singing subsequent to its initial

detection. Juvenile birds are recorded as “J”s regardless of their behavior, so they can be excluded from most analyses as appropriate.

Breeding observations

For each species we record any indications of breeding status if noted during the point count survey at each point as follows (also detailed on bottom of form):

- CO – copulation
- DI – territorial display
- DD – distraction display
- FC – food carry
- FL – fledglings
- FS – fecal sac carry
- MC – material carry
- NF – nest found
- PA - pair

Going between points

After completing the first point, continue as quickly as possible to the next point, navigating with your GPS unit, compass, narrative and/or map as appropriate. Follow the directions outlined above for this and every point. Any interesting species or observations made between each point should be noted in the margins of your point count form. If you have fewer blank lines left on the page than you think you will get species at the next point, cross off those lines and continue on the next page in order to reduce page flipping during the point.

Estimating weather

Around the timing of your first point of the morning, fill out the weather at the bottom of the page to the best of your abilities, estimating temperature, cloud cover, and wind speed.

Form

Attached is the VCP form. Note that it has been reduced in size to fit the page here. For field purposes the form should be obtained from <http://data.prbo.org/cadc2/index.php?page=songbird-point-counts> (Accessed: June 9, 2009).

Pg _____ of _____

State Region Station Month Day Year Visit

First Name	Last Name	Address	Telephone	Email
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[illegible]

Behav. Obs: AF = aerial foraging, CO = copulation, MC = material carry, FC = food carry, NF = nest found, FL = fledglings, FS = fecal sac carry, DD = distraction display, PA = pair, DI = display

Weather Information: Please estimate temperature, cloud cover (% of sky covered by clouds), and approximate wind speed.

_____° F or C (circle one) _____% _____ mph, knots, or kmph (circle one)

Temperature Cloud Cover Wind Speed

ENTERED _____ PROOFED _____