

WISA CPB Monitoring Field Methods

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Standard distance between call playbacks (CPB) is 800 m (or more) in April when WISA are very responsive. As the season progresses, WISA become less responsive, and the spacing between CPB points must decrease until late June, when 200 m or less spacing is required. Even at 200-m spacing in June, some pairs simply become unresponsive to CPB at all, and relative density is not comparable to earlier in the season. In that case, a complete search (to within 50 m of every single part of the search area) is required to determine presence/absence.

Even at 800-m CPB spacing, sometimes the same bird can be heard on successive points. Record such birds at both points, but make a comment (e.g., "same as previous"). Call playback equipment used for road monitoring are FoxPro 416 digital playback unit (or current equivalent NX4, etc) through a FoxPro SP108 speaker (a large megaphone with front bell dimensions of 25-cm x 17-cm) (or current equivalent). The field sheet to use in the field is attached at the end of this report. Just use 1-sided data sheets (to make your data-entry life easier).

Enter the project, type of monitoring, general location, surveyors names and date at the top of the page. At each CPB point, enter name of the point, time of day (that you arrived at point), air temperature, sustained wind speed (Beaufort), speed of any wind gusts, cloud cover (where 1 = clear, 2 = <50% clouds, 3 = >50% clouds, 4 = overcast) and precipitation (**N**one, **D**rizzle, **F**og, **M**ist, **L**ight **R**ain, **L**ight **S**now). Do not sample in heavy rain or heavy snow, and if you feel uncomfortable standing outside, and need a hat to keep dry, then you should not be sampling even in light rain. Sampling can be conducted starting 30-min before sunrise until before dusk (actual sampling hours in first week of April 2015 were between 630 h and 1830 h). However, there is a time of day effect, with highest responsiveness at sunrise and until 1-hour afterwards. Only sample if sustained winds are <Beaufort 4, and not in heavy rain. Drizzle and light snow are okay as long as winds are <3. Record maximum wind gust during CPB period separately from sustained wind speed. If sustained wind speeds are Beaufort 3 with gusts >3, then discontinue survey. Preference is for sustained wind speeds <3 allowing for occasional stronger gusts. If any doubt about WISA responsiveness, discontinue survey.

We have standardized the methods so that each CPB point sample consists of three broadcasts of a 10-15 second Williamson's Sapsucker drum and call combination repeated three times changing direction each time. This is followed by a silent listening period of 3 minutes. This pattern of broadcasts (3 drums, 2 chyaahs, 4 scolds and 2 more chyaahs, with 10-15 seconds silence, and then repeat two more times) was combined into one MP3 file, which takes 1:20 to broadcast (**001WISA_FoxPRO_CPB_120second.mp3**). A stopwatch is started when the broadcast begins playing, considered to be time = 0 sec. Easiest is to use the Stopwatch page on your GPS unit to keep time. Continue listening until the stopwatch goes to 4:20, i.e., 3 minutes after the end of the last WISA call broadcast.

Record the time (min:sec) of any first WISA response from the beginning of the CPB. If a WISA is detected from a point before CPB started, it is given a time of 0 sec. Only record a single WISA once, but if another WISA starts calling, or is seen, record the time of that WISA's

first detection as well. Continue CPB with discretion (to avoid stressing nearby WISA) once a WISA is detected because frequently the additional calls/drums that you play prompt additional WISA to begin calling or drumming.

For each detection record the sex (male, female, unknown or pair), the number and the type of responses (visual, drum and/or call), the direction (compass degrees) to its FIRST detection, and the estimated distance (m) of the first detection. Even if it comes closer later, which happens regularly, record the FIRST detection distance and direction. Anything else like closest approach goes in the comments. In open areas or over very short distances where the stand or tree where the WISA is first detected can be seen, measure distance using a laser rangefinder, and put distance to exact meter. If no laser rangefinder, record distance estimate to nearest 25-m multiple (e.g. 25, 50, 75, 100, 125, . . .), or use Google Earth or other Moving Map software to estimate distance, if you can tell which stand the bird is in. In closed forest, estimate distances based on the volume attenuation of the drum or call, which will not be as reliable as when the WISA can be seen, and requires experience. I have found observers without considerable experience are frequently very far off in these distance estimates. Estimate your accuracy for each detection in the correct column.

Record results including NULL results on provided field sheets. If you want to stuff the sheet in a notebook, or you use a half-size clipboard that fits in the chest pocket of a field vest, use the half-size sheet page.

Use more than one line if >1 WISA detected. However, pairs detected nearly simultaneously in nearly the same spot can be recorded as P (for pair) on the same line (Total WISA = 2).

I often record all woodpeckers (including number of each species) in the comments column. Use "Woodsp" for unidentifiable drums. However, this is optional. If you are going to record them, be consistent and record at every point.

GPS instructions:

Waypoints for standard censuses or annual monitoring should be designated beforehand in a GIS setting using a stated study design, and loaded into a GPS unit or moving map software (e.g. Avenza or OziExplorer). If you have a favourite waypoint upload method for your GPS, then use it. Waypoints are provided in shapefile, GPX or OziExplorer wpt formats.

For recent Garmin GPS units (e.g., 62, 64, 66, 78, Oregon, Montana, etc), you can import the point .gpx file into the correct folder on the Garmin (/Garmin/GPX). The waypoints will then show up on the GPS unit. If using a tablet or smartphone, the method to get waypoints into the unit will vary.

Data Entry:

If you are going to enter the data, enter into ***WISA 2016 Monitoring SPI-template.xlsx***. While not the latest version, all the essentials are still in that version. Eventually, for any WISA project, this should make its way to me (LG) for entry into the long-term master database of CPB points and of WISA observations. If you are not going to enter the data, just take a photo of each page with your phone (or etc), or scan as jpg or pdf, and submit the photos/scans.

WISA Project: _____

Survey Area:

Pg ___/___

YYYY-MM-DD

Surveyors:

[illegible]

Beaufort	Wind Speed Indicators
0	Smoke rises vertically
1	Wind direction shown by smoke drift
2	Wind felt on face; leaves rustle
3	Leaves and small twigs in constant motion
4	Raises dust and small branches are moved
5	Small trees in leaf begin to sway
6	Large branches in motion
7	Whole trees in motion

Sky	Current Precipitation
1 clear	N No Precipitation
2 scattered clouds (<50%)	F Foggy
3 scattered clouds (>50%)	M Misty Drizzle
4 unbroken clouds	D Drizzle
	LR Light Rain
	HR Hard Rain
	LS Light Snow
	S Snow

For WISA:

WISA Instructions: CPB takes 1:20, then 3:00 listening (total 4:20)

V = Visual

D = Drum

C = Calls of any sort

Use laser for distance or use orthophoto/google Earth (don't guess)

If first detected before CPB, record time as "0"

Start stopwatch with beginning of first sound on the mp3.

Record time to response (min:sec) from start of CPB

**Use 1 line per WISA detected, i.e. use >1 line if >1 WISA/pt
but do not repeat first 4 columns**

WISA CPB Project:_____

Survey Area: _____

Pg __/__

YYYY-MMM-DD

Surveyors: _____

[illegible]