

National Marsh Bird Monitoring Program Survey Data Sheet

Date (eg 10-May-04): 20 April 2006
Name of marsh or route : Hidden Shores Marsh
Observer(s) (list all)*: Chris Nadeau, Bob Blabla
Survey replicate # : 2

	Before	After
Temperature (°F):	10	21
Wind speed (mph):	0	1
Cloud cover (%):	15	60
Precipitation (see below):	none	none

*list all observers in order of their contribution to the data collected
 put an "S" in the appropriate column if the bird was seen, a "1" if the bird was heard, and "1S" if both heard and seen

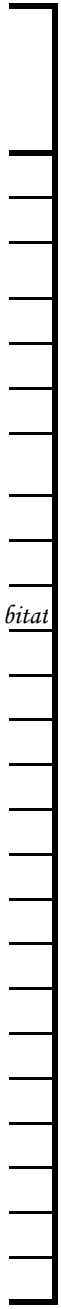
Station#	Start Time (military)	Background noise	Species	Responded During:											Call Type(s)	Direction	Distance (meters)	Detected at a Previous Point	Comments					
				Before	Pass 0-1	Pass 1-2	Pass 2-3	Pass 3-4	Pass 4-5	BLRA 5-6	LEBI 6-7	VIRA 7-8	CLRA 8-9	After										
HSM1	1710	0	BLRA		1	1					1							grr	↻	95	N			
			BLRA			1					1	1	1	1	1			kicky-doo	↻	110	N			
			VIRA				1S						1					ticket, grunt	↻	30	N			
HSM2	1721	1	CLRA	1														p-cltr	↻	40	N	V		
			CLRA	1														p-cltr	↻	45	N			
			VIRA										1					grunt	↻	100	Y			
			CLRA											1				throaty hoo	↻	10	N			
HSM3																			○					
HSM4	1750	1	COMO		1	1	1		1		1		1					wipeout	○	150	N			
			SORA											1				perweep	○	210	N	Not surveyed unsuitable hab		
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Call Types: BLRA: kicky-doo, grr, churt CLRA: cltr, kburr, kek, khurrah LEBI: coo, kak, ert VIRA: grunt, ticket, kicker

If the call type is not one of the above listed types, describe the call in the comments column

Precipitation: light rain, rain, heavy rain, light snow, snow, heavy snow, fog, none

Background noise: 0 no noise 1 faint noise 2 moderate noise (probably can't hear some birds beyond 100m)
 3 loud noise (probably can't hear some birds beyond 50m) 4 intense noise (probably can't hear some birds beyond 25m)



Quick Reference for the National Marsh Bird Monitoring Program Standardized Protocols

The following is a summary of the standardized protocols for the National Marsh Bird Monitoring Program. This summary was designed as a quick reference guide to be used as you are becoming familiar with the various procedures used to establish routes and conduct surveys. This is not a replacement for the protocols. All surveyors should read the standardized protocols prior to conducting surveys.

Creating permanent survey stations and routes

- Prior to the survey season create permanent survey routes to be replicated both within and between years. If you are surveying previously established routes or stations you should become familiar with the location of each route and station prior to the beginning of the survey season.
- Routes should be composed of permanent survey stations. Survey stations should be marked with stakes, flagging, or other markers in the field and recorded in a GPS to assure all replicate surveys are conducted at exactly the same location each year.
- The number of points on a particular survey route should correspond to the number that one surveyor can get done in a morning survey window (see below).
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If you are creating points for the first time, survey points should be spaced approximately 400m apart. All points should be located along either the wetland/upland interface (accessed by land) or the wetland/open water interface (accessed by boat).

Timing and completion of surveys

- The morning survey window should correspond to when marsh birds are most vocal in your area. Remember, marsh birds are typically most vocal in the 2 hours after sunrise. Hence, surveys should begin 30 minutes before sunrise (first light) and should be completed prior to the time when marsh birds cease calling (but never later than 10:00 am).
- Routes should always be completed in the same direction during each replicate survey (starting with the same point and ending with the same point) each year. This ensures that each station is surveyed at approximately the same time of day on each
- In the case that a survey has to be discontinued prior to completing the entire survey route due to unforeseen circumstances (wind, batteries died, etc) with more than 2 stations remaining unsurveyed, the entire route should be completely re-surveyed on a subsequent day. If you do not have enough time in the season to re-survey the entire route, then finish the remaining points on a subsequent day. However, you must start the remaining points at the same time you discontinued the previous survey. This assures that the remaining stations are surveyed during the similar time of day as all previous surveys at those stations.
- All stations should be surveyed on each replicate survey. Stations should not be removed from a survey route. If a station is determined to be unsuitable to survey during one or more replicate surveys, the station should still be recorded on the datasheet with a comment stating why the point was not surveyed.
- Surveys should only be conducted when wind speed is <20 km/hr, and not during periods of sustained rain or heavy fog.
- You can start the CD immediately after arriving at the point. No settling period is necessary.

Broadcast CD

- The broadcast CD should be obtained from the National Marsh Bird Monitoring Program Coordinator. The CD is composed of 1 track which contains 5 minutes of silence followed by 30 seconds of broadcast and 30 seconds of silence for each of 4 marsh bird species (Black Rails, Least Bitterns, Virginia Rails, and Clapper Rails).
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The CD should be broadcast using a portable CD player and a set of portable amplified speakers (see protocol for recommended brand names and models and contact Lesley or Courtney if you have questions on broadcast equipment).

- Speakers should be placed on the ground or on the bow of the boat as close to the wetland interface as possible, facing into the center of the wetland.
- The broadcast CD should be played at a volume of 80-90 db measured 1 meter from the speakers.

Recording species detected

- Each **individual** marsh bird detected should be recorded on a **separate** line on the standardized datasheet.
- Record all 1 minute segments in which each individual bird was heard or seen (see Example data). For example, if a Virginia rail off to your right called during the third passive minute and again during the Virginia rail broadcast period, you would put a '1' in both the Pass 2-3 column and a '1' in the VIRA column in the row corresponding to that individual Virginia rail.
- '1' is recorded for all aural detections of an individual, 'S' is recorded for all visual detections, and "1S" is recorded if the bird was both heard and seen.
- Also record the type of call(s) given by each bird, whether the individual was a repeat detection from a previous station, and the estimated distance (in meters) to the individual bird at the time the individual was first detected at that point.
- You also have the option of recording the direction to the individual. This is recommended if multiple individuals of the same species are being detected at each point. By recording the direction to each individual bird, it is often easier and faster to keep track of which individual is which on the datasheet.

- If a bird is detected prior to pressing play on the CD-player or after the CD stops, record the detection of the individual in the Before or After columns on the datasheet
- If a pair of birds calls together (duet, common in CLRA and VIRA) record the call type as "p-" plus the call type and draw a line between the two entries on the data sheet. For example, if a pair of CLRAs clatter together, record each individual on a separate line of the datasheet following the procedures above. The call type for both individuals would be "p-cltr" and you would draw a line between both records on the datasheet to indicate that the two individuals were paired. Note, both individuals still get their own line on the data sheet.
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although only 4 species are included in the broadcast sequence on the CD, surveyors should, if possible, record all individuals of all species of secretive marsh birds. This may be done individually as for the 4 target species, or as a numerical estimate of the number seen or heard on the transect. The other species of interest are: Black Rails, Virginia Rails, Soras, Yuma Clapper Rails, Least Bitterns, American Bitterns, Common Moorhens, and Pied-billed Grebes. Other bird species of interest to the surveyor may be added to the list of birds detected if that addition will not affect data gathering for the 4 target species.