

## Instructions for Conducting Whip-poor-will Surveys

Thank you for agreeing to participate in the Massachusetts Whip-poor-will Survey a project of the Northeast Nightjar Survey and the Northeast Coordinated Bird Monitoring Partnership in cooperation with Mass Audubon, New Hampshire Audubon and other state partners. Whip-poor-wills (*Caprimulgus vociferus*) are believed to have declined severely in the past 50 years, so the purpose of the survey is to collect information on the abundance and distribution of this species in the Northeast. These data will be used to track population trends and to identify areas where these species may still be relatively abundant, in order to guide land protection efforts, habitat management, and future research.

This Survey relies on a network of volunteers to conduct standardized surveys along roadside census routes during specific lunar conditions. The only experience necessary is a familiarity with the Whip-poor-will's characteristic song (you can listen to the songs at <http://www.massaudubon.org/whippoorwill/what.php>). Volunteers are asked to conduct a single nighttime survey along pre-established routes between early May and mid-July (depending on location). Please read carefully and follow closely the instructions that follow. Compliance with these instructions will ensure standardized data collection and a more successful survey.

**IF YOU HAVE PARTICIPATED IN THIS PROJECT PRIOR TO 2007, PLEASE READ THESE INSTRUCTIONS CAREFULLY, SINCE MUCH OF THE PROTOCOL HAS CHANGED.**

### Conducting Surveys

#### **Seasonal and Daily Timing:**

Begin each survey at least 15 minutes after sunset and end no later than 15 minutes before sunrise (check your local newspaper or the U.S. Naval Observatory website at <http://aa.usno.navy.mil/> for sunset and moonrise times). **SURVEYS MUST BE CONDUCTED DURING PERIODS WHEN THE FACE OF THE MOON IS AT LEAST 50% ILLUMINATED (the "quarter moon"), AND WHEN THE MOON IS ABOVE THE HORIZON. The table below gives the acceptable dates, assuming lack of cloud cover, for 2007-2008.**

#### **Acceptable dates for nightjar surveys in the Northeast in 2008**

The two windows for conducting Whip-poor-will surveys in Massachusetts in 2008 are : May 12-28 and June 11-26. Note that the moon rises later each evening during these survey periods, and that by the end of the period a pre-dawn survey would be required. In such cases be sure to leave roughly 1.5 hours to complete the survey so that it ends before sunrise. *It is critical that surveys are conducted during appropriate lunar conditions, irrespective of the date within the survey period.*

**\*\*SURVEYS CANNOT BE CONDUCTED OUTSIDE THESE DATES\*\***

Surveys should not be conducted in overcast conditions (e.g., the moon is mostly obscured), when precipitation stronger than an intermittent light drizzle, or if wind speed averages above 8 miles an hour see below for estimating wind speed).

#### **Route Logistics:**

The starting point is stop number 1. All other stops are spaced 1 mile apart along the route as indicated roughly on your map. If the one-mile mark places you in a location that is not conducive to the survey (no place to pull off, excessive highway noise, barking dogs, directly in front of home, otherwise unsafe location), you may continue on for UP TO 1.2 miles. Be sure to continue with one mile spacing to the next point. Note that on some routes not all points are located in a continuous line, and instead have one or more points along side roads. Please be sure to follow any instructions that accompany the map in such cases. It is advisable to scout your route during daylight to familiarize yourself with point locations and any unforeseen problems with access. Locations of points can be written on the "Route Description Form" at this time. If you have questions about the route please contact your state coordinator. Please run the stops along a route in the same order during each survey.

#### **Completing the Survey Form:**

These instructions are referenced to the headings on the Survey Form (See below). Please report data as accurately and completely as possible, and complete a separate form for each route on each survey date. You may want to

conduct a test run on a date prior to your scheduled survey so as to become familiar with the census techniques and the form.

**Route Name:** Create a name if devising your own route or copy from map supplied by one of your state coordinators.

**Observer:** Record your name here.

**Date:** Indicate the date of the survey.

**Time Start:** Indicate the time at which you begin listening at stop 1.

**Time End:** Indicate the time at which you stop listening at stop 10.

For each point we are asking that you give a rough indication of the following environmental conditions which are known to affect bird calling or our ability to detect them. ONLY USE THE 0-3 CODE SYSTEM OUTLINED BELOW.

Wind: Record the rough wind speed at each stop using the codes below. Do not begin a survey if wind is considered MODERATE or STRONG. If wind intensifies during the survey, and winds of MODERATE or STRONG persist for more than three stops, we recommend that you end the survey and attempt it again under better conditions.

Code	Wind Speed	Description
0	Calm (<1 mph)	smoke rises vertically
1	Light (1-7 mph)	smoke drifts, weather vane inactive, leaves rustle, can feel wind on face
2	Moderate (8-18 mph)	leaves, twigs, and thin branches move around, small flags extend, raises loose papers. <b>Do not conduct survey.</b>
3	Strong (19 mph or greater)	small trees begin to sway. <b>Do not conduct survey.</b>

Sky Condition: Record the sky condition at each stop using the codes below. Do not begin a survey if the sky is completely overcast, there is heavy fog, or there is persistent rain or drizzle. If cloud cover intensifies during the survey, and CLOUDY or MOSTLY CLOUDY conditions persist for more than three stops, we recommend that you end the survey and attempt it again under better conditions.

Noise: Assign a noise code to each stop. Noise codes are a measure of the effect of noise on your ability to hear Whip-poor-wills. Although we have provided examples of noises for each code, these are meant only as general guidelines. It is ultimately up to you to judge to what degree the noises you encounter are affecting your ability to hear Whip-poor-wills. Record the number of cars that pass by during the survey in the next row.

Code	Description
0	There is no appreciable effect on your ability to hear Whip-poor-wills
1	Noise slightly affects your ability to hear Whip-poor-wills (e.g. distant traffic, dog barking, 1-2 car passing during survey period).
2	Noise moderately affects your ability to hear Whip-poor-wills (e.g. nearby traffic, 3-6 cars passing during survey period, airplane flying overhead).
3	Noise seriously affects your ability to hear Whip-poor-wills (e.g. continuous traffic nearby, construction noise, loud spring peeper chorus, more than 6 cars passing during the time spent at one point).

Cars: Record the number of cars that pass by during each the entire count period as a rough index of traffic noise.

### Counting Whip-poor-wills:

We encourage two observers to conduct the survey together, however *a single observer is acceptable if the route would not otherwise get covered*. Each observer should count and record the birds detected INDEPENDENTLY of the other – in other words do not discuss what you are hearing during the point or alter your data form after the count in light of information received from your survey partner. One of the two observers should be the designated timekeeper, and announce the start of the survey and the break between the one-minute periods (below).

At each point, each observer will spend SIX MINUTES listening for Whip-poor-wills, with each bird and one-minute period treated independently. What this means in practice is that you will have a single line on the survey form for each bird detected (see example below) and you will mark whether you detect it in each of the six one-minute periods. Birds will sometimes move during the count, and you will need to use your best judgment when deciding if a “new” detection is actually an additional bird or simply an already-counted bird that has moved its location. Listening and recording data should be done from a stationary point outside the car. **DO NOT** use whistling, playbacks, or any other method of coaxing birds. Record only birds detected during the six-minute sample period, although you may record birds detected outside of this period in the Comments section. Record birds as you hear them, rather than waiting for the sample period to be over, so as to avoid errors of omission.

Use the following abbreviations for each species on the data form:

WPWI = Whip-poor-will

CWWI = Chuck-will’s-widow. This species nests very locally on Martha’s Vineyard and possibly Cape Cod and is included in the sample form below in order to demonstrate the recording methodology.

If NO BIRDS are detected on a point, enter the point number as usual, followed by “NONE” instead of a species code, and leave the columns for each time period blank (or draw a line through them). Doing so will reduce the possibility of becoming confused during a survey and forgetting which point you are on.

### Sample Data Form:

Pt.	Species	1	2	3	4	5	6
1	WPWI	1	1	1	1	1	1
1	WPWI	0	0	1	1	1	0
2	NONE						
3	WPWI	1	1	1	0	0	0
3	WPWI	0	0	0	1	1	1
3	CWWI	0	0	0	0	1	0
3	WPWI	0	0	0	0	1	1
4	CWWI	1	1	1	0	0	0
4	WPWI	0	1	1	1	1	1
5	Etc.						

In this form a “0” indicates that a given individual was NOT detected, while a “1” indicates it was. For example, at Point 1 a Whip-poor-will was heard in the first one-minute period and every period thereafter. A second Whip-poor-will was first detected in the third period and heard in the following two periods before becoming silent. No nightjars were heard at Point 2. At Point 3 a Whip-poor-will was heard during the first three periods but not the second three. A different Whip-poor-will was first detected in Period 4 and heard again in Periods 5 and 6. Because it did not overlap with the first bird, there is a possibility that they are the same bird and that it moved between Periods 3 and 4. Some cues that might suggest this are if calling ended early in Period 3 and started late in Period 4, but there is no hard and fast rule. Use your best judgment. Also at Point 3, both a Chuck-wills-Widow and Whip-poor-will were detected in Period 5, with the latter continuing into Period 6. The fact that this bird overlapped with the second Whip-poor-will is clear evidence that there are at least two of Whip-poor-wills at this point. At Point 4, a Chuck-will’s-widow was heard in Periods 1-3 and a Whip-poor-will in Periods 2-6. This process would continue through Points 5-10.

While this change in recording protocol may at first appear confusing, such is only likely to be the case at points where there are several birds calling at once. In such cases it may become difficult to keep-track of individual birds during each one-minute period, but doing so is made easier by the fact that you need only record each as a “0” or “1” at during each period.

**Comments:** Use this field to provide any additional information not included in the table. Example of such data include:

- other nocturnal species detected (owls, woodcock, marsh birds – please indicate Point Number)
- details on noise factors that might impede your ability to detect nightjars (use only if you used Noise Code 3 on a given point)
- Whip-poor-wills detected between points or after the six-minute period is over
- any other information you wish to convey

**Questions?**

Call Chris Leahy, Mass Audubon: 978-927-1122 ext. 2702 ([cleahy@massaudubon.org](mailto:cleahy@massaudubon.org)) or Chris Buelow, Mass Natural Heritage and Endangered Species Program: 508-389-6300 ext.6350 ([Chris.Buelow@state.ma.us](mailto:Chris.Buelow@state.ma.us))

# Massachusetts Whip-poor-will Survey

Route Name (ST):										
Observer:										
Date:										
Start time:					End time:					
<b>Weather Data at Points:</b>										
<b>Point:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Wind										
Sky										
Noise										
Cars										

Please remember that surveys should not be conducted under cloudy or windy conditions, or when there is persistent rain. If such conditions manifest after a route is started, and persist for more than (three) points, it is advisable to abort the route and attempt it again under better conditions.

Wind Codes	Sky Codes	Noise Codes
0 = none	0 = clear	0 = none
1 = slight	1 = m clear	1 = slight
2 = moderate	2 = m cloudy	2 = medium
3 = strong	3 = cloudy	3 = excessive

Pt.	Species	1	2	3	4	5	6

Pt.	Species	1	2	3	4	5	6

Comments (use back of form if necessary):

Return Form to:  
[NHESP: c/o Chris Buelow](mailto:Chris.Buelow@NHESP.com)  
 MA Division of Fisheries & Wildlife  
 1 Rabbit Hill Rd., [Route 135](#)  
 Westborough, MA – 01581-3337

## Whip-poor-will Route Description Form

Route Name: \_\_\_\_\_

State: \_\_\_\_\_

Year: \_\_\_\_\_

This form has three purposes:

- 1) Record specific information on the observers assigned to a specific Whip-poor-will route
- 2) Provide a space where observers can record details about each point location during a non-survey visit to the route
- 3) Allow for recording of habitat information at each stop along a route (optional)

### Part 1: Observer Information

	Observer #1	Observer #2
Name		
Address		
City, State, Zip		
Phone Number		
Email Address		

### Parts 2 and 3: Route Information

Point	Location Description	# Houses Visible	Dominant 3 habitats (see below)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Habitat Codes:

PF = Pine/Conifer/Mixed Forest

D = Developed (urban, residential area)

W = Water

HF = Hardwood Forest

O = Open (fields, lawn, gravel pits)

M = Marsh/Wetland