The Singing-ground Survey provides an index to the relative size of the woodcock breeding population in North America. It is the most important source of data used to guide federal, state and provincial woodcock programs. As part of their courtship behavior, male woodcock exhibit aerial and vocal displays each evening. They begin by giving calls described as “peents” shortly after sunset. From habitat types called singing-gounds, birds alternate “peent” and make flight songs. New survey participants should become thoroughly familiar with these woodcock sounds before running routes. Visit http://www.allaboutbirds.org/guide/American_Woodcock/id for identification tips and to hear a sound clip of a peenting woodcock.

Original survey routes were run in areas of prime habitat where woodcock were known to be present, but subsequent studies showed that these counts did not accurately reflect overall woodcock densities. Consequently, new routes were selected randomly so that all habitat types would be surveyed and results would better reflect the status of the overall woodcock population. A normal characteristic of such random surveys is that some routes will fall in unfavorable habitat, so do not become disheartened if you do not hear birds on your route. Your results are still valuable.

Please follow the below instructions closely so that data from your route will be of maximum value. The quality of the survey depends on you.

**Survey protocol requires that whenever possible the same observer should run the same route each year. If it is known that a new observer will take over next year, both observers (old and new) should run the survey together this year, if possible, to allow for one year of overlap. New observers should complete the survey with the previous observer on the same day at the same time, however both should collect and submit data independently (observers should ride together in the same car, but collect data on separate survey forms and not discuss what they hear or compare results). This will ensure that the new observer learns survey procedures and local route conditions. Further, because observer data are used as covariables to adjust for differences in observers’ ability to hear woodcock, and the approach used to calculate the 2-year population trend requires at least 2 non-zero counts by at least one observer, overlapping new with previous observers will ensure that route data qualifies for the 2-year comparison. If a year of observer overlap is not possible, data collected by a new observer is still valuable and will still qualify for the long-term trend analysis.**

**DISTURBANCE**

**SURVEY DATES**

See the survey map (below) to determine survey dates in your area. When spring weather is early or late, contact the North American Coordinator for permission to conduct routes up to 5 days outside the survey period. We encourage cooperators to run survey routes early within their survey window.

**CALCULATE START TIME USING LOCAL SUNSET TIME AND SKY CONDITIONS**

Correct timing is the key to valid data! **Calculate the start time for your survey date using the provided local sunset times and the formula below.** Record the sunset time for the survey date on the survey form. If the sky is clear or up to and including 3/4 overcast, add 22 minutes to the sunset time to determine the starting time. Or, add 15 minutes if the sky is more than 3/4 overcast. Example: If sunset = 6:30, and it is more than ¾ overcast, start at 8:45. If it is ⅓ or less overcast, start at 8:52. If your judgment dictates variation from this timing, as in the case of deep valleys, clearly explain under “Remarks.” Do not use military time. If sunset times are not provided, consult <https://www.esri.noaa.gov/arc/gloisocalc/> or the local media. (If you use an alternate or media sunset time source please write your source on the survey form as your start time calculations will be verified accordingly).

**PROCEDURE**

Plan to arrive at stop 1 (the start = 0.0 mi/km) of your route at or shortly after local sunset. Using the Trip Odometer makes recording and data entry much easier. When the start time approaches, shut off your vehicle’s engine and step several feet away. At the start time, record the time on your survey form and commence listening for woodcock. Listen for 2 minutes and record the number of different woodcock heard “peenting.” Then proceed rapidly 0.4 miles (0.6 km) to stop 2 and repeat the procedure at each subsequent stop through stop 10 (3.6 mi/5.4km). If a temporary hazard prevents stopping within 100 feet (0.3 km) of the 0.4 mile (0.6 km) mark, proceed to the next stop and note “no stop-permanent hazard” in the space for the stop omitted. If the hazard is likely to be permanent note “no stop-permanent hazard” and contact your coordinator. Be sure to check the survey form’s box that indicates if your odometer readings are in miles or kilometers. SGS routes must be completed in the allotted time period (38 minutes). Therefore, begin listening for woodcock at stop 10 no later than 36 minutes after the time at stop 1. This ensures that the survey is conducted during the peak activity period of “peenting” male woodcock. Survey procedures allow for 2 minutes of listening/recording time at each stop, and an additional minute for travel time in between stops. If a temporary hazard prevents you from listening at a stop or completing the survey route within the specified amount of time, please clearly explain the reason in the remarks column.

**RECORDING COUNTS**

Only record the number of different “peenting” woodcock. Do not record birds you hear performing only the flight song, and do not record the number of “peents” heard. When no birds are peenting, record “0” in the appropriate column. When disturbances at a particular stop make a count impossible, note the type of disturbance and proceed to the next stop. Upon completion of the route, record the total number of birds heard.

**DISTURBANCE**

**Description**

**Example**

<table>
<thead>
<tr>
<th>Disturbance</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>No appreciable effect on count.</td>
<td>Occasional crow calling.</td>
</tr>
<tr>
<td>LO</td>
<td>Slightly affecting count.</td>
<td>Distant tractor noise.</td>
</tr>
<tr>
<td>MOD</td>
<td>Moderately affecting count.</td>
<td>Intermittent traffic.</td>
</tr>
<tr>
<td>HI</td>
<td>Seriously affecting count.</td>
<td>Heavy-continuous traffic.</td>
</tr>
</tbody>
</table>

**THINGS TO AVOID**

Do not run routes when the temperature is below 40°F (5°C), in heavy precipitation or strong wind. Do not run routes when the temperature is below 40° F (5°C), in heavy precipitation or strong wind.

**NUMBER OF TIMES TO COUNT**

Normally, conduct a route only once during the specified period. However, if weather or other factors cause invalid counts at five or more stops the route should be rerun and data recollected on another evening.

**REPORTING**

Immediately after running your route, submit 1 copy of the survey form to your State Coordinator, keep 1 copy on file for your records and do one of the following: scan/upload to the FileShare link, scan/email to WeblessSurveyCoordinator@fws.gov, fax to 301-497-5981, or mail original form to Woodcock Survey, U.S. Fish & Wildlife Service, Division of Migratory Bird Management, 11510 American Holly Drive, Laurel, MD, 20708.

Survey routes should also be entered via the Internet at https://migbirdapps.fws.gov/woodcock and survey forms must be received at the Laurel office no later than the day following your state’s survey date window.

Your cooperation is greatly appreciated. You can view and print the Singing-ground Survey results online at https://www.fws.gov/birds/surveys-and-data/reports-and-publications/population-status.php every August. You can also query and download Woodcock SGS route level data at https://migbirdapps.fws.gov.