

## Bat acoustic monitoring: volunteer details and duties

2026

### Why:

Bat populations across much of eastern and Midwestern North America are declining due to the disease White Nose Syndrome (WNS). Identification of areas in Iowa where bats are most abundant is critically needed to understand the potential ramifications of WNS to Iowa. Acoustic monitoring surveys that rely on recording bat echolocation calls are an efficient way to monitor bat populations and identify areas of high bat activity in Iowa.

### Where:

We will conduct acoustic monitoring for bats along road transects across Iowa. We will also be placing stationary bat acoustic units near the transect locations. Volunteers may need to survey the driving route and also set up and take down up to 2 stationary detector sites that will be at locations near the driving route.

The transects and stationary sites are in randomly selected grid blocks that exist in several counties across the state. The counties listed below are where volunteers are needed in 2025 (subject to change).

County	Survey Grid ID Number	Driving, Stationary or Both Needed
Boone	2	Driving
Benton	2571	Both
Bremer	859	Both
Clayton	1	Driving
Dubuque	1	Driving
Harrison	1483	Driving
Keokuk	779	Both
Mahaska	459	Both
Pocahontas	3019	Driving
Sac/Calhoun	2763	Both
Sioux	2075	Both
Story	2	Driving

### When:

Each mobile transect is surveyed at night twice during a two-week period in the month of July. The two runs of the survey should be no more than 7 days apart within this two week period. Stationary data collection sites are also set up during this timeframe.

**How:**

Teams of two are necessary. Volunteers will mount a microphone to the roof of the vehicle and attach it to a bat detector in the vehicle. One person will drive while the other person will monitor the equipment and provide directions to the driver. Volunteers will drive a transect beginning 45 minutes after sunset. Drivers will proceed at 20 mph and follow specific turn-by-turn instructions to complete the transect which will be up to 30 miles in length. Driving the route one time will take up to 1.5 hours plus drive time to and from the start and finish of the route.

Near most of the routes there are also 1-2 sites where stationary acoustic equipment is deployed. At stationary sites, equipment is placed at a specified location and then left for a period of days before being retrieved. This is done in the same time period the nearby mobile route is being run. It is easiest if the volunteers who run the mobile survey also set up and take down the stationary site but it is not required.

**Requirements:**

- A Flexible Schedule is a must (transects cannot be conducted during rainy, foggy, or windy conditions).
- Personal vehicle to drive the transect and get to the stationary site.
- Willingness to conduct a transect twice within 7 days during a two-week assigned period in July.
- Teams of at least 2 are needed to conduct a transect.
- Comfortable driving slowly (20 mph) on country roads (gravel) after dark (road transect).
- Ability to accurately record data on datasheets and enter data into an online form.
- Willing and able to coordinate with others to pick-up and exchange equipment that must be shared between transects.
- Ability to participate in a virtual training sometime in late June.
- Comfortable with technology and willingness to learn how to use the recording equipment.
- For stationary sites, the ability to hike some distance in a forested landscape, perhaps on private land.

An estimate of the overall time needed during the two weeks (in July) in which the surveys must be conducted is roughly 11-12 hours. Volunteers must:

- Pick up the equipment at a hub local to the survey routes (1 hour)
- Potentially put out equipment at 1-2 stationary sites in the vicinity of the driving route (2 hours)
- Survey the Driving Route twice (4-5 hours)
- Pick up equipment at two stationary sites (2 hours)
- Enter Stationary and driving route data (30 minutes)
- Return the equipment to the hub or the next volunteers who need it (1 hour)