

ENDANGERED

Indiana & Northern Long-eared Bats

It's unlawful to harm, harass, collect, or possess these bats. These species are protected in Pennsylvania.



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DEPARTMENT OF TRANSPORTATION
www.pennndot.gov

PUB 546A (12-19)

Bats are ecologically and economically important. They provide \$3 billion in estimated economic value as pollinators and insect population controllers annually.

Indiana Bat

The Indiana bat is a federal and Pennsylvania state endangered cave bat, hibernating from fall until spring in limestone caves and abandoned mines. Most Indiana bats roost in larger trees with loose bark in the summer. The Indiana bat is about 3 1/2 - 5 1/2 inches in length with a 9 - 11 inch wingspan. They closely resemble the more common little brown bat. Human disturbance during hibernation, bat/vehicle collisions, wind turbines and the white-nose syndrome (WNS) fungus are reasons for the species decline.

Northern Long-Eared Bat

The Northern Long-eared bat (NLEB) is a federally threatened species. This species has suffered one of the most significant declines in recent years as a result of white-nose syndrome. The NLEB is only 3-4 inches long having a 9-10 inch wingspan and notably long ears when compared to other bat species of similar size. NLEB is also a cave bat found in limestone caves and abandoned mines in winter and roosting under loose bark in trees in summer.



Photo Credit: Alan Hicks, New York Department of Environmental Conservation.

Cover Photo Credit: Indiana Bat. Cal Butchkowski, Pennsylvania Game Commission.

Activities With Potential to Impact Indiana & Northern Long Eared Bats

- Tree removal
- Bridge/culvert/pipe replacements
- Bridge maintenance
- Vegetation maintenance
- Sink hole/slide repairs
- Repair/install gabions
- Repair/install retaining walls
- Building demolition
- Structural repair/replacement of tunnel roof/ ceiling girders

White-nose fungus infected Northern Long-eared Bat. Note the white fungus.

Photo Credit: Alan Hicks



Standard Avoidance & Minimization Measures

The following must be implemented for all activities and projects that may affect Indiana or Northern Long-eared bats (NLEB). Refer to the list of activities with potential to impact these species. Some activities and projects will require implementation of additional avoidance measures that may include seasonal and/or time of day work restrictions, bat emergence surveys, bat bridge assessments, use of sensitive lighting when lighting is included as part of an activity, installation of exclusion barriers, and/or purchase of mitigation credits. Contact the district environmental manager to determine if additional measures are required.

1 Complete a final PNDI ER* during annual planning. If there is a bat conflict with identified seasonal and/or time of day conservation measures, confirm that these measures can be implemented and sign the PNDI receipt acknowledgement. Calculate the DBH of the trees using the measuring instructions when only a few trees are being removed. Avoid tree removal in excess of what is required.

2 Schedule the work activity in accordance with any seasonal or time of day work restrictions required. Re-confirm that the schedule complies with any restrictions during intermediate and weekly planning. Ensure that all persons working in areas of known, or assumed occupied Indiana or NLEB habitat are aware and familiar with PennDOT bat briefing materials prior to starting the action.

3 Use high visibility orange construction fencing or flagging to delineate avoidance areas or trees to avoid cutting during the action. This will act as a visual warning to prevent construction equipment and personnel from entering and disturbing sensitive areas or removing trees that should be retained to maintain bat habitat.

* Pennsylvania Natural Diversity Inventory Environmental Review

4 Locate project storage and staging areas only in upland areas located as far away as possible from wetland/ watercourse habitat areas. Implement secondary containment or other spill prevention measures to protect potential hibernacula in karst, sinkhole prone areas . Establish a 300 foot buffer between fueling and other high risk activities and any caves, sinkholes, losing streams and springs to the extent practicable.

5 Notify all public utilities potentially associated with the action of the potential presence of the species and their need to consult with the USFWS on their respective relocation activities.

6 Direct all temporary lighting away from suitable (forest) bat habitat. Use downward facing, nighttime friendly cutoff lighting when installing/replacing permanent lighting.

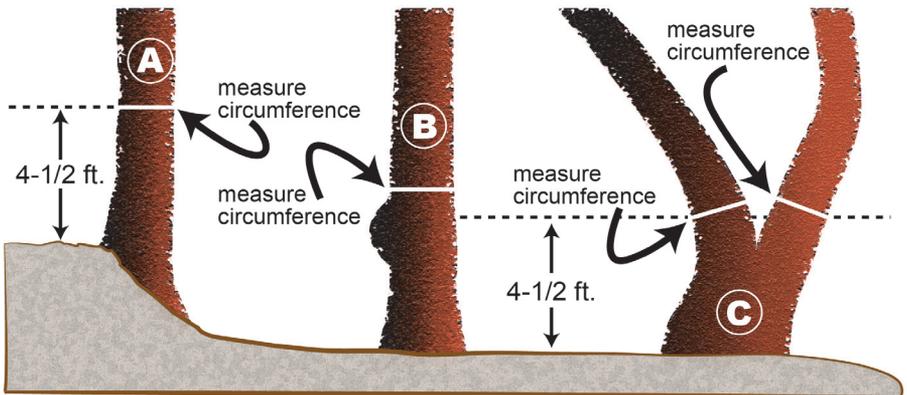
7 STOP all work activities immediately if a bat is encountered. Contact the district project manager and district environmental staff who will notify the US Fish and Wildlife Service to pursue further agency consultation in accordance with applicable laws.



How to Measure DBH

DBH = the tree diameter measured at 4.5 feet above the ground. Measure the circumference and divide that measure by 3.14 (π) to get the DBH.

Use the figure below to determine where to measure when your tree has a bulge, or fork at 4.5 feet or when it is located on a slope.



Statewide activities must avoid adverse impacts to Indiana and NLEB. The NLEB is a federally threatened species, and the Indiana Bat is federally and state endangered. Both species are protected by applicable laws. These species hibernate in winter in caves, mine openings, and sinkholes. They roost in fall, spring, and summer typically in trees greater than 5" diameter at basal height, but can also be found roosting under bridges, in tunnels, building structures, or in rock/ rock-like faces. These assemblies have the potential to adversely affect these species. AMMs including time of year restrictions may be necessary. All operators, employees, and contractors working on assemblies in areas where these species may be present must be provided briefing materials prior to the initiation of the activity.

If a bat is encountered, then all work activities will cease immediately and through the District Project Manager and District Environmental staff the US Fish and Wildlife Service will be notified and further agency consultation in accordance with applicable laws will be coordinated.



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To report issues or if you have questions related to Indiana or Northern Long-eared long-eared bats contact the office in your area and request the environmental manager.

- District 1: Erie | Warren | Crawford | Forrest | Venango | Mercer | 814-678-7085
- District 2: Cameron | Centre | Clearfield | Clinton | Elk | Juniata | McKean | Mifflin | Potter | 814-765-0614
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