## WHO? WHY?

Environmental Solutions & Innovations, Inc. (ESI) is a small environmental consulting firm headquartered in Cincinnati, Ohio. We conduct various kinds of ecological studies and surveys. We are probably known most widely for our work with bats.

ESI was hired to conduct summer bat surveys along the proposed gas transmission line. You are receiving this brochure because you have a property that may be affected by or in proximity to such a project; therefore, there is potential that bat surveys may need to be conducted on your property.



Indiana Bat
(Myotis sodalis)



For more information, please visit http://mountainvalleypipeline.info/



Northern Long-eared Bat (Myotis Septentrionalis)

**Environmental Solutions & Innovations, Inc.** 



www.ENVSI.com

## About Bats

Most people think of caves when they think of bats. While many of the bats in this part of the United States do hibernate in caves during the winter, and some even use caves in the summer, there are also certain species that have other living arrangements during the summer.

During summer months, bats spend their time eating and sleeping and females raising their young. Bats are insectivorous and pluck insects out of the air during flight, or sometimes off plants or the ground. Indiana bats spend their daylight hours sleeping inside hollow trees, under flaking tree bark, in cracks or crevices of rock outcrops, or sometimes even in buildings.



Indiana Bat (Myotis sodalis)

## Mist Net Surveys



During summer, bats can be captured using a device similar to the one shown above. First, two metal poles are erected using ropes tied off to trees for support. Then, nearly invisible nylon netting is strung between the poles. As the bats are looking for food, they do not "see" the nets, fly into them, and become tangled. Bats are untangled, weighed, sexed, measured and identified to species, and released unharmed at the point of capture.

In order to capture bats, you must think like a bat, and that is just what our biologists do. In general, they look for places where there is water, or where there are certain kinds of trees, or where there is a natural pathway, such as a stream, a small road or trail, or any number of other things that can indicate good bat habitat. We search for new places to net every two to three days. (We must move our nets frequently because bats tend to avoid areas where they have been caught.)

We typically locate potential net sites in the late afternoon. However, because bats are nocturnal, our surveys are conducted at night – typically between 6 pm and 3 am. Our surveys do not damage the environment, do not harm the bats, and do not produce any noise/sounds.

## Portal Searches



During winter, Indiana bats are found in areas of well-developed limestone caverns, which serve as hibernacula. Most hibernacula are in caves, but abandoned mines are sometimes used.

Entering unknown portals is dangerous, so our biologists evaluate whether a portal is suitable for hibernating bats from the outside. If they find suitable portals, bat trapping, mist netting, or ultrasonic sound (bat) detector can be used to survey bats as they enter and exit the portal.