Indiana Department of Natural Resources
Division of Forestry

Wildlife Habitat Management on Indiana's State Forests

The forests of the Midwest have always been diverse and dynamic, having been continually shaped by a variety of natural and human-caused disturbance events. Fires, windstorms, insects, floods, and droughts have all played a significant role in how our forests have developed. Plant and animal communities that rely on forest habitats have also been affected by these events and have developed a resiliency to change and disturbance that has allowed their populations to endure over time. On Indiana's State Forests, managers prescribe forest management activities to mimic the effects of natural disturbance events that have historically affected our forests, knowing that native wildlife populations have adapted to, and in many cases benefit from, forest disturbance. While this management philosophy is appropriate in most cases, many rare or threatened species require special consideration when planning forest management activities. Therefore, State Forest managers must take a comprehensive approach to forest management planning by maintaining an overall healthy, sustainable forest environment while giving special consideration to species of greatest conservation need.

Wildlife habitat management has always been an integral part of state forest management, and the review of important habitat components and unique natural communities is part of each forest resource and timber harvest plan. State-wide natural heritage databases and other species occurrence records are analyzed during the management decision-making process to determine if such species or communities exist on tracts where management may occur. Management activities are planned to protect or promote special habitats, communities, or populations that are thought to occur on managed tracts. Important wildlife habitat elements, such as dead trees (snags) and cavity/den trees, are regularly inventoried on State Forests, providing essential information that is directly used to plan forest management activities. Forest managers regularly document the presence of invasive species and plan appropriate management strategies to control or eliminate problems well before they threaten wildlife habitats or populations.

Photo: U.S. Fish & Wildlife Service, Adam Mann

Additionally, the Division of Forestry has taken a lead role in endangered species management for its work with federally listed species such as the Indiana bat and gray bat. For over a decade, management activities on State Forest properties have been conducted in accordance with a series of special guidelines and strategies designed to protect these species and their habitats. Management guidelines developed in coordination with the U.S. Fish and Wildlife Service (USFWS) address various habitat requirements throughout the year, and include vital protection measures for the caves where bats hibernate through the winter and maternity roosts where females and their young find cover during the summer. To further complement the

Division of Forestry's efforts to protect bat habitat on State Forests, a *Habitat Conservation Plan* (HCP) is currently being developed in cooperation with the USFWS. An HCP is a legally binding agreement between the USFWS and either a private entity or non-federal government that specifies conservation measures that will be implemented to minimize and mitigate harm to threatened or endangered species. In exchange for the HCP, the USFWS can issue a permit that would allow a landowner to proceed with an activity that is legal in all other respects but results in the incidental taking of a listed species. Once adopted, the Division of Forestry's HCP will be the among the first ever to have addressed Indiana bat management concerns on an actively managed forest, providing a positive model for other states, natural resource agencies, and forest managers.

The Division of Forestry provides substantial support for research on State Forests that investigates issues and questions related to forest management and wildlife conservation. Among the species of greatest conservation need that are currently being studied on State Forests: the state endangered cerulean warbler and numerous other neotropical migrant bird species, Indiana bats and other forest bat species, timber rattlesnakes, and box turtles. Research on forest bats, including the federally endangered Indiana bat, has provided a better understanding of what species can be found on State Forests and which habitats are used most often by bats. Research on wildlife populations and habitat is critical for effective management and conservation; the Division of Forestry recognizes this need and dedicates a significant proportion of timber sale revenue towards such research efforts.


Photo: Sam Carman, DNR

The Division of Forestry's *State Forest Environmental Assessment* was developed in 2008 to evaluate the possible short- and long-term habitat impacts of forest management activities and the programmatic maintenance of the oak-hickory forest type across the State Forest system. Researchers, land managers, and conservationists agree, maintaining the oak-hickory forest type throughout the Central Hardwood region is of critical importance to the native wildlife species found here, and the Division believes future management should emphasize the preservation of this essential, yet threatened, forest type. The status, habitat requirements, and major threats of over 130 species found on State Forests were evaluated to determine possible direct and cumulative impacts. Though the Division of Forestry is exempt from the necessity of completing and Environmental Assessment for each of its forest management activities, we took this initiative to better understand potential impacts of such a large system-wide program.