

- achieve and maintain a natural diversity and abundance of game and nongame wildlife species including those dependent on mature timber (special consideration and/or protection should be afforded resident threatened and endangered species);
- manage other resources in ways that provide habitat needs of desired wildlife species, considering the species and the entire property.

Regardless of the landowner's goals, providing suitable wildlife habitat should be considered when performing any management activity.

Relation to other resources

It is no more logical to design a management plan that considers only wildlife than it is to design a plan that exclusively considers timber, soils, water, or recreation. Wildlife populations are closely related to these other resources. Practices that encourage increased soil fertility, undisturbed hydrological systems, diverse plant communities and minimal disturbance are generally of the most benefit to wildlife. Enhancing natural ecosystems should serve as a goal for land management decisions. However, habitat requirements sometimes can be accommodated and occasionally improved by management practices performed primarily to benefit the other resources. Special efforts should be made to recognize and protect threatened and endangered species, preserve standing dead trees (snags) on the property for wildlife use and incorporate BMPs in forestry and other land management operations.

Practices that enhance wildlife habitat

Maintaining diverse habitats or plant communities on a property is most often the emphasis for wildlife management components in a stewardship plan. This is particularly true when another resource is the primary objective of the landowner. When natural diversity and transition between habitats does not exist on a property, the plan should include measures to create it. This may be accomplished by several practices.

The first step is to identify important habitats such as wetlands and upland hardwood areas so that steps may be taken to maintain and link these areas. Ideally, strips of native vegetation 75 to 200

feet wide, containing a component of mature hardwood and pine timber, should be left when timber harvests are conducted. These areas will provide structural diversity, cavities, and other important niches not available in recently reforested sites.

Streamside and wetland areas are another essential habitat for wildlife. BMPs (see *Soil and Water Conservation*, p. 15) should be used for minimum widths of riparian areas. Pine plantations and clearcuts should be kept as small as practical, with adjacent stands being composed of different age classes (5 to 7 years apart). This will promote a diversity in the amount and type of ground cover and species throughout the area being reforested. Individual areas should be irregular in shape to maximize the available edge effect. Standing snags, where available, should be retained at a density of one to three trees per acre for the benefit of cavity nesting species and to serve as perch sites. In pine plantations prior to canopy closure, further enhancement for wildlife will entail creating and maintaining adequate forage. Mowing between the rows of pine trees in February and/or August-September will control undesirable trees and shrubs while at the same time enhancing forage, seed, mast and fruit production. Mowing on a 3-year rotation will maximize diversity.

Between adjacent pine plantations or in areas where two or more habitats come together, transition zones should be created or re-established. These areas may also serve as firebreaks, access points, and food plots. Openings within timbered stands are also readily utilized by wildlife and add to the diversity of an area. Depending on the species featured for management, 2 to 5 percent of the property should be maintained as permanent openings. Supplemental plantings should provide a year-round food source. Perennial grasses and legumes as well as mast-producing trees and shrubs should dominate these areas.

Aggressive thinning in pine-dominated stands will ensure adequate sunlight for understory species. Prescribed fire should be the primary management tool used to maintain diversity in vegetative composition and forage quantity and quality (Figure 4). The season, frequency, and intensity of fire should be based on the existing vegetative communities and featured species.