

Enhancing Bottomland Hardwood Forests for Birds in the West Gulf Coastal Plain: Key Desired Habitat Characteristics



Hardwood stands and trees provide many important habitat features for a variety of wildlife, including priority songbirds and game species such as Wild Turkey and White-tailed Deer. One important opportunity for providing hardwood stands within a managed pine landscape is through enhanced stream buffers or streamside management zones (SMZs). Best Management Practices (BMPs) for SMZs are important, particularly for protecting water quality, and should be followed where applicable. However, enhancing those stands to provide quality habitat for birds and other wildlife requires additional considerations. The following recommendations help to insure healthy bottomland hardwood stands and conditions that support priority birds and wildlife:

Feathered Transitional Bottomland Edges

Maintain a transition zone of shrubs and/or early succession forest that creates “feathered edges” ≥ 50 ft between the SMZ and newly harvested or planted stands. Avoid creating an abrupt transition from upland/plantation to Bottomland/Riparian/Buffer habitats to reduce predation within the forest, particularly near the edges (≤ 100 ft). Abrupt transitions encourage predation, especially on ground- and low-nesting species, such as Eastern Wild Turkey and Kentucky Warbler.

Notable species that benefit: all, especially Eastern Wild Turkey, Kentucky Warbler

Bottomland Forest at Higher Elevations

Retain mature trees and adequate canopy in the higher-elevation portions of bottomland forests. Many species dependent on bottomland forest nest and/or forage on or near the ground. Retaining hardwood forest farther away from the stream and out of more frequently-flooded zones is critical for these species during periods of high water.

Notable species that benefit: Kentucky Warbler, Eastern Wild Turkey, Wood Thrush, Louisiana Waterthrush, Swainson’s Warbler, Rusty Blackbird (winter)

Large/Mature Trees (≥ 20 inch dbh)

Retain these larger trees (≥ 16 trees/acre) within SMZs and bottomland forests. Most species of conservation concern breeding in bottomland hardwood habitats require the structure associated with large, mature trees (≥ 20 inch dbh). These trees are also important sources of mast and other important foods.

Notable species that benefit: Acadian Flycatcher, Prothonotary Warbler, Red-shouldered Hawk, Yellow-throated Warbler, Northern Parula, Wood Thrush, Yellow-throated Vireo, Eastern Wild Turkey

Canopy Cover

Maintain canopy cover between 60 and 70% for a relatively well-stocked forest that also allows enough sunlight for desired vegetative structure on and near the ground. Many species depend upon a relatively dense, diverse understory and midstory for feeding and/or nesting. This key habitat condition results from sufficient openings that allow sunlight to reach the ground. Careful harvest of select overstory trees within the streamside zone can allow sunlight to reach the forest floor and encourage understory and midstory growth that provides cover for nesting and valuable foods.

Notable species that benefit: Acadian Flycatcher, Kentucky Warbler, Red-shouldered Hawk, Eastern Wild Turkey

Snags & Cavities

Retain >3 snags/acre. Many species depend upon cavities for nesting, including Wood Ducks, owls, woodpeckers, and Prothonotary Warblers. Providing this important habitat component requires retention of old trees and snags, with particular attention to those with existing cavities. Retaining a variety of snags in adjacent upland stands, in addition to those in the bottomland forest, also is important to a variety of wildlife species.

Notable species that benefit: Prothonotary Warbler, Wood Duck, woodpeckers, owls

Bottomland Hardwood Priority Map

Managing for the Key Desired Forest Characteristics within bottomland forest depicted in the map is recommended. Doing so within higher priority forest stands has a much greater probability of substantially providing for the breeding habitat needs of bottomland hardwood birds. Prioritization of bottomland hardwood forests for conservation within this region is based on the large-scale habitat needs of priority breeding birds. Broad habitat suitability factors (e.g., distance to water, percent forest nearby, flood tolerance/flood preference, and bald-cypress-tupelo floodplain forest) for five representative species (Prothonotary Warbler, Kentucky Warbler, Red-shouldered Hawk, Yellow-throated Warbler, Acadian Flycatcher) were combined to arrive at the prioritization map.

Lower Mississippi Valley Joint Venture Bottomland Hardwood Forest Spatial Priorities

