

# WOOD PELLET INDUSTRY DESTROYS FORESTS AND HARMS BIRDS OF CONSERVATION CONCERN



Wood pellet cut on the Roanoke River, North Carolina

The rapidly expanding wood pellet industry in eastern North Carolina is destroying hardwood swamps and other native forests to manufacture wood pellets for export to Europe. Under flawed European policies meant to reduce carbon and address climate change, the exported wood pellets are used, instead of coal or other renewable sources, to produce energy.

In response to increasing demand from Europe, the wood pellet industry is focusing on sourcing wood from the Atlantic and Gulf coastal plains in the southeastern United States. Much of this wood is whole trees that are clear cut and hauled to pellet facilities. At these facilities, the trees are ground into chips, dried, and formed into pellets. The pellets are transported to ports where they are shipped to European power plants where they are burned to produce energy.

At scheduled production levels (2.35 million dry metric tons/year, 80 percent hardwood input), the three existing and two proposed Enviva wood pellet plants in eastern North Carolina and southeastern Virginia will require cutting approximately 30 square miles (78 square kilometers) of hardwood forests in the sourcing area every year. Over a 25-year period, this sourcing will require harvesting 750 square miles (1950 square kilometers) of forest—an area approximately the size of the Great Smoky Mountains National Park in North Carolina and Tennessee.

*Loss of mature hardwood forests harms numerous species of birds that depend on the forests for survival. Many of the birds harmed by the expanding wood pellet industry are already the focus of conservation efforts to reverse population declines due in part to the historical loss of wetland hardwood forests in the southeastern United States.*



Prothonotary Warbler

JEFF LEWIS

## Loss of Valuable Hardwood Forests

Seasonally flooded forests (known as bottomland forests) and other wetland forests in the Atlantic coastal plain are among the United States' most valuable ecosystems. Slow-growing bottomland hardwood forests absorb and store an enormous amount of carbon. They buffer communities from storms and floods, and remove nutrients and other pollutants from water to maintain the quality of streams, rivers, and estuaries. These forests are among the United States' most important habitats for fish and wildlife. The U.S. Environmental Protection Agency estimates that, despite their high value, 60 percent of the 30 million acres of bottomland forests that once existed in the southeastern United States have been destroyed. As a result, numerous species dependent on these forests are rare, declining, or of conservation concern.

At least 30 species of birds dependent on coastal plain bottomland hardwood forests are the focus of conservation efforts. Nineteen of these are neotropical migrants that breed in coastal plain hardwood forests and winter in the Caribbean and Central and South America. One of the only Atlantic coastal plain populations of the Cerulean Warbler occurs along the Roanoke River in North Carolina, within the sourcing area for two Enviva

wood pellet manufacturing facilities. Cerulean Warblers have declined by 8.2 percent annually in the southeastern United States coastal plain over the most recent 35-year assessment period. Across its range, the species is declining at one of the fastest rates of any North American songbird, and is ranked by the International Union for Conservation of Nature (IUCN) as globally vulnerable.

North Carolina's bottomland hardwood forests are of particular importance to some species. The distinct Wayne's subspecies of Black-throated Green Warbler only occurs in the hardwood and cypress wetland forests in the coastal areas of the Carolinas and Virginia, a target sourcing area for the wood pellet industry. Its small population is declining by 2.6 percent annually. North Carolina bottomland hardwood forests provide habitat to 18 percent of the global population of Prothonotary Warbler, 14 percent of the global population of Yellow-throated Warbler, and 11 percent of the global population of Acadian Flycatcher.

Clear cutting mature hardwood forests for wood pellet production destroys breeding areas that are critical to these species and will undermine ongoing conservation efforts essential to their recovery.



Bottomland hardwood along Roanoke River, North Carolina

# Birds of Conservation Concern Harmed by Loss of Mature Hardwood Forests in the Atlantic Coastal Plain

LLOYD SPITALNIK



Cerulean Warbler

JEFF LEWIS



Hooded Warbler

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Worm-eating Warbler

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Wayne's Black-throated Green Warbler

JEFF LEWIS



American Woodcock



Kentucky Warbler

- Wood Stork <sup>5</sup>
- Yellow-crowned Night-Heron <sup>4</sup>
- Red-shouldered Hawk <sup>1</sup>
- Bald Eagle <sup>4</sup>
- Swallow-tailed Kite <sup>1,2,3,4</sup>
- Mississippi Kite <sup>4</sup>
- American Woodcock <sup>4</sup>
- Yellow-billed Cuckoo <sup>4</sup>
- Chimney Swift <sup>4</sup>
- Red-bellied Woodpecker <sup>1</sup>
- Red-headed Woodpecker <sup>1,3,4,6</sup>
- Hairy Woodpecker <sup>4</sup>
- Ivory-billed Woodpecker <sup>1,3,5,6,7</sup>
- Eastern Wood-Pewee <sup>4</sup>
- Acadian Flycatcher <sup>1</sup>
- Wood Thrush <sup>1,2,3,4</sup>
- Carolina Wren <sup>1</sup>
- Yellow-throated Vireo <sup>1</sup>
- Bachman's Warbler <sup>1,3,5,6,7</sup>
- Wayne's Black-throated Green Warbler <sup>2,4</sup>
- Yellow-throated Warbler <sup>1</sup>
- Cerulean Warbler <sup>1,2,3,4,6</sup>
- Northern Parula <sup>2</sup>
- Hooded Warbler <sup>1,4</sup>
- Prothonotary Warbler <sup>1,3</sup>
- Worm-eating Warbler <sup>1,4</sup>
- Swainson's Warbler <sup>1,2,3,4</sup>
- Louisiana Waterthrush <sup>1</sup>
- Kentucky Warbler <sup>1,3,4</sup>
- Rusty Blackbird <sup>1,3</sup>

<sup>1</sup> Partners in Flight, Species of Continental Importance in the Eastern Avifaunal Biome, North American Landbird Conservation Plan (2004).

<sup>2</sup> U.S. Fish & Wildlife Service, Birds of Conservation Concern (Southeast Coastal Plain Region) (2002).

<sup>3</sup> National Audubon Society and American Bird Conservancy, WatchList 2007.

<sup>4</sup> N.C. Wildlife Resources Commission, North Carolina Wildlife Action Plan (Priority Species) (2005).

<sup>5</sup> Federal Endangered.

<sup>6</sup> IUCN Critically Endangered, Near Threatened or Vulnerable.

<sup>7</sup> Extirpated?



Swallow-tailed Kite



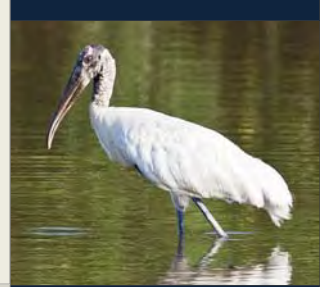
Yellow-crowned Night-Heron



Red-headed Woodpecker



Wood Thrush



Wood Stork



Swainson's Warbler

JOHN ENNIS

## Flawed Energy Policy

Despite the deceptive claims of the wood pellet industry, evidence shows that whole trees are the primary source of wood pellets exported to Europe from the southeastern United States. The growing demand for wood pellets is being driven by flawed energy policies in Europe that wrongly view wood biomass as a means to address climate change.

Harvesting whole trees and forests that are decades old creates an initial “carbon debt” because new trees will take decades to store the same amount of carbon that is stored by existing forests. Assessments based on the growth rates of trees in the southeastern United States conclude that the “carbon debt” created by harvesting whole trees will exist for 35 to 50 years, resulting in more, not less, carbon in the atmosphere for decades to come. Burning wood pellets instead of coal actually puts more carbon into the atmosphere per BTU of energy produced over the life cycle of both energy resources. Many climate scientists believe we need to begin to reduce carbon emissions immediately.

All assumptions about the carbon benefits of wood biomass assume trees and forests that are



Clear cut Roanoke River hardwoods , North Carolina

harvested for energy are regrown and sustainably managed. If not, there would be no eventual carbon storage to compensate for the initial carbon emissions from burning the wood.

In the southeastern United States, 87 percent of the forestland is privately owned and will supply the bulk of the wood pellets. However, no law or regulation in the region exists that requires private landowners to regrow or sustainably manage their forests. The growth of the wood pellet industry will result in an irrecoverable loss of ecologically valuable forests without any carbon benefit to show for it.



Hardwood trees at Enviva wood pellet mill, Ahoskie, North Carolina