Illinois Forestry Development Council

Critical Issues Facing Illinois Forests and Forestry

Critical Issue: The Need for Enhanced Protection and Management of Remaining Illinois Riparian (Streamside) Woodlands and Forests

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What Distinguishes a Riparian Woodland? Riparian woodlands and forests are areas of woody vegetation adjacent to streams, rivers, or lakes. Riparian vegetation can form a narrow strip or can extend out several hundred yards from each side of a water body. Under natural conditions, riparian vegetation acts as a transition zone or buffer between land and water, a buffer that can filter and retain pollutants and sediment in groundwater and surface runoff.

Why are Riparian Woodlands Important? Riparian woodlands and forests play important roles in maintenance of water quality, biological diversity, and streambank stabilization. By performing these functions, riparian areas help keep water fit for both human consumption and recreation. Serious environmental and economic consequences of degraded riparian vegetation are becoming increasingly evident and have become critical resource management issues in Illinois and other Midwestern states.

- **Water Quality:** Excess nutrient runoff from lands in agricultural production can be reduced by the presence of riparian buffers. While nutrients are needed to sustain life in aquatic ecosystems, too many nutrients can cause large "blooms" of unsightly algae, causing the water to have an undesirable taste and odor. Excess nutrients affect the balance of chemicals in the water -- making it difficult for water quality standards to be met. Trees and woody shrubs growing in riparian areas have been shown to provide important water quality benefits.
- **Biological Diversity:** Trees help shade streams, thus keeping them at optimum temperatures for fish and other aquatic life. In addition, limbs and leaves fall into the water, creating in-stream habitats. Woody debris is also a source of carbon that drives important in-stream chemical processes. On the land, forested riparian areas provide ribbons of habitat often quite distinct from the surrounding landscape. As these linear habitats follow the path of a water courseway, they create natural travel corridors for wildlife. The USDA Natural Resources Conservation Service reports that over 70% of terrestrial wildlife species use riparian corridors.

Remnant forested riparian buffer in the Big Muddy Watershed

-Photo credit: W. Mangun

"We must reinforce the need for riparian corridors, and also provide additional incentives to landowners to convert these areas back to trees."

-Illinois citizen comment

- **Streambank Stabilization:** Sediment or soil that washes into a stream is a form of pollution. Increased sediment can cause silt deposits on the bottom of streams and muddy or cloudy water. This cloudiness decreases the amount of sunlight able to reach aquatic plants, reducing oxygen production in the water. In addition to filtering runoff, riparian vegetation also prevents the collapse of streambanks. The roots of trees and woody shrubs help anchor soil, thereby reducing erosion and "slumping" of the banks into the water.

What is the Present Status of Illinois Riparian Forests? Agricultural, industrial, and urban expansion has resulted in the removal or reduction of much of the native vegetation that once flourished alongside Illinois streams and rivers. While few hard numbers are available on existing acreage of forested riparian areas, some of the best examples of Illinois forests, such as those of the Kaskaskia River Watershed, persist today in bottomlands and floodplains. Given the added water quality benefits of these areas, conservation of remnant riparian woodlands and forests becomes essential.

Although Illinois has over one million acres actively enrolled in Conservation Reserve Program (CRP) contracts, the majority of these acres are planted in grass. Farmers and landowners have been reluctant to incorporate trees into riparian buffer restoration plans.

What are Some Possible Solutions? Management of riparian woodlands and forests focuses on conserving a mix of native vegetation. Conservation efforts need to be for the long haul. As CRP contracts expire, landowners need to understand why streamside land should not be converted back to row crop production. Planting trees must be made to work economically for the farmer and landowner. Incentive program contract lengths should reflect the longer maturation time of wooded buffers.

State programs like Conservation-2000, which promotes watershed-scale, problem solving partnerships, need to be strengthened and continued. The need for more landowner education and technical assistance programs and the forestry professionals to administer them becomes evident.

Additional Reading

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