

# Forest management makes a difference

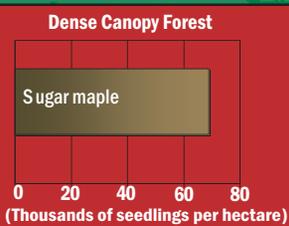


**Dense canopy vs. Forest managed for an open woodland**  
(Photos were taken at the same time of the year)

A managed forest has greater species diversity and a greater ability to absorb stormwater to prevent erosion of slopes.



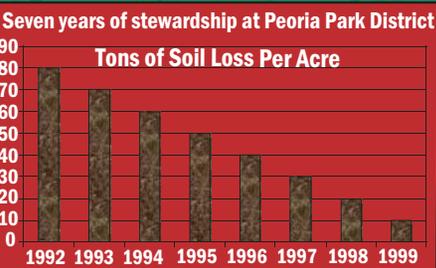
This tree community is diverse and consists of numerous species.



Dense canopy forests are overrun with seedlings of invasive sugar maples that prevent growth of other tree species.



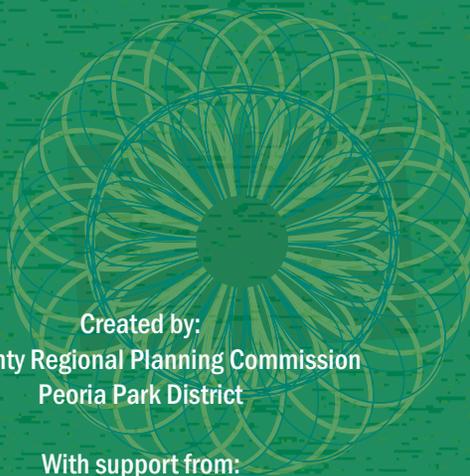
Native ground cover roots reach over 15 ft into the ground. These plants flourish in open woodland conditions.



As ground cover is established on the bluffs, rates of erosion become much less.

# Healthy Forest Habitats Prevent Erosion

Studies throughout our forests in Central Illinois show that effective ecological restoration will reduce erosion and increase habitat for native plants and animals. Be a part of the solution by being proper stewards for our wooded slopes. Contact Forest Park Nature Center at (309) 686-3360 to find out more!



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# A LANDOWNER'S GUIDE: FOREST MANAGEMENT TO PREVENT EROSION ON THE ILLINOIS RIVER BLUFFS



Woodford, Tazewell, and Peoria Counties

# Erosion in the Forested Bluffs



While there are many culprits for erosion within the bluffs, dense tree canopies have a large and potentially devastating effect by reducing ground vegetation and exposing vulnerable soils to erosion.

## Sheet Erosion

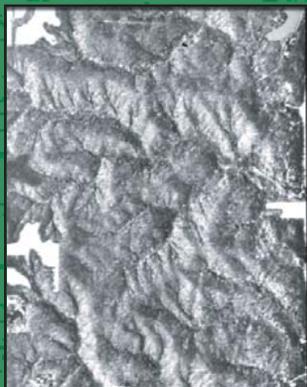


Soil under rocks is left intact while exposed soil is washed away, leaving these odd soil pedestals.

## Ravine Erosion



1938



1998

Aerial photograph depicting ravine formation from 1938 - 1998 at Singing Woods Nature Preserve.

# Forest Management Techniques

**GOAL:** Provide an open woodland habitat that allows the growth of native ground cover necessary for slope stability.

**OBJECTIVE:** Thin or eliminate (where appropriate) invasive plant species.

## Techniques

Cut or pull 80% of undesired tree species\*\* (i.e sugar maples) that are under five inches diameter at breast height.

These trees were cut and treated with herbicide\* to prevent re-sprouting.



Girdling is an alternative to cutting. While it is less labor intensive, results can be delayed for up to two years.

Girdle: To cut or apply herbicide\* in a manner that completely encircles the trunk/stem to destroy vascular tissue.



Girdling is effective on sugar maples, but is not appropriate for all trees. \*\*

\* Trees require specialized herbicide application. Contact your local University of Illinois Extension Center for more information.  
\*\*Contact your local forester to learn about treatment of other undesirable trees.

Continue to remove undesirable saplings each year by pulling or professional prescription burns. These saplings are aggressive and will prevent growth of desirable plants.

Completely remove all non-native invasive plant species. Commons species include autumn olive, honey suckle, and multiflora rose. For a more complete list of exotic species see the Exotic Species Photo Gallery on the Education webpage of the Illinois Department of Natural Resources. [www.dnr.state.il.us](http://www.dnr.state.il.us)



Garlic mustard is a major nuisance in Illinois forests. Garlic mustard should be pulled in early spring before seeds are produced (greens in February) and bagged to prevent the spread of seeds.

Remnant seeds will often provide native vegetation and seed purchase is not necessary; however, re-seed and plant oak and hickory trees where vegetation is lacking after two years of stewardship.



Garlic mustard



Autumn olive