

Woodland Management

OVERSTORY

MIDSTORY

UNDERSTORY

VALUE POTENTIAL

ROOT DIAGRAM

Side View: Without Management



- ▷ Overstory is overcrowded with a low diversity of species. Limited timber and habitat value.
- ▷ **a:** Poorly formed trees are suppressed and will not improve in quality.
- ▷ **b:** Canopy branches are dying due to overcrowding and disease.

Side View: With Management



- ▷ Healthy, productive overstory has high value potential.
- ▷ **Tree selection:** oaks, black walnut, shagbark hickory, black maple, black cherry.
- ▷ Trees produce nuts and berries for wild turkeys and other wildlife.

The crown-to-height ratio reveals how much sunlight is reaching the trees. When trees are growing too densely and do not receive enough sunlight, the height of the crown makes up less than 30% of each tree's overall height. When the crown comprises more than 50% of the height, the woodland is too thin for quality timber production.

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Side View: High Quality - The Forest of Tomorrow



How many standing dead trees are in your woods? Wildlife benefits the most with 8-10 per acre.

"Snags" or cavity trees provide homes for birds, bats, bobcats, raccoons, hawks, owls, squirrels, and other wildlife.

- ▶ The midstory includes valuable native shrubs and trees reaching maturity, such as American plum, serviceberry, chokecherry, dogwood, and downy hawthorn.
- ▶ **a:** Vines connect the ground to the treetops for wildlife to move around. They produce food and provide cover for small birds and mammals.
 - Desirable vines:** wild grape, wild cucumber, moonseed, poison ivy¹, and virginia creeper.
 - Undesirable vine:** oriental bittersweet (invasive).
- ▶ A well-managed midstory provides habitat for wildlife and pollinators, beauty, and the opportunity to forage for fruit and nuts.

1. Poison ivy fruits are highly desirable for birds. Poison ivy produces fruits along woodland edges.

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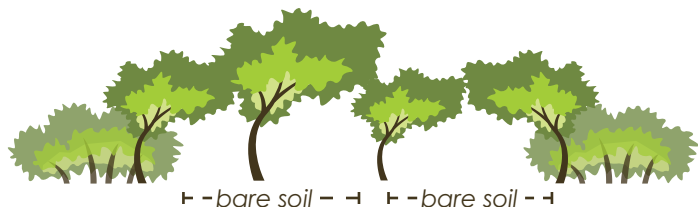
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Side View: Before



- ▷ In the dense shade beneath invasive shrubs, the soil is bare and eroding. Wildflowers, native shrubs, and trees cannot regenerate. Little timber or wildlife habitat value will remain after the current overstory has died or is removed. Water quality is poor and valuable land washes away.
- ▷ **Invasive species:** honeysuckle, Japanese barberry, autumn olive, multiflora rose, garlic mustard, oriental bittersweet, buckthorn and more.

Side View: After



- ▷ Healthy, diverse, and productive understory is filled with native wildflowers, grasses, and sedges that buzz with pollinators when in bloom.
- ▷ **a:** Dense roots and downed woody debris protect the forest floor from erosion and provide natural water filtration.
- ▷ **b:** Successful regeneration of valuable tree species has resulted in 800-1,200 young seedlings per acre (1" d.b.h., 6' tall).
- ▷ **c:** Enjoy more woodland edibles such as morels, oysters, chicken of the woods, hen of the woods, and wild woodland ramps.

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Ecological Value of Management:

- Threatened and endangered animals and plants can persist.
- Pollinators can thrive and benefit crops.
- Water and air quality improve.

Personal Enjoyment:

- Be able to walk through your woods.
- See diverse songbirds and wildflowers.
- Have the satisfaction of a healthy, regenerating resource and a legacy of innovative land stewardship.

Revenue Potential with Management:

- Timber sales: \$1,000-\$135,000/acre every 60 years
- Hunting: \$15-\$50/acre annually
- Honey and maple syrup production
- Agritourism



State, federal, not-for-profit, and private sources of financial assistance are available to help you improve your land. Contact Prudenterra for more information.

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- ▷ Successful woodland management encourages plants with diverse root structures. This helps prevent soil erosion and promote carbon sequestration.

