



Multiple Benefits of Woodland Management

Kansas Rural Center's Annual Farm and Food Conference
Presented by John DuPlissis



Presentation Overview

- What are some of the benefits and who enjoys them?
- What's possible
 - Condition
 - Capability
 - Objective
- Managing for Multiple Benefits
 - Timber
 - Wildlife
 - Recreation
 - Aesthetics



Benefits to you

- Economic
 - Timber
 - Non-timber
 - Carbon
 - Biofuels
- Family
 - Ties to the land
 - The land is . . .
 - a nexus for memories
 - a physical representation of ties to ancestors and future generations
 - Place not Space
- Recreation
 - Quiet
 - Motorized
 - Hunting
- Restorative
 - “Meet my psychiatrist”



Benefits to society

- Agricultural
 - Berries, fruits, and nuts
- Economic
 - Timber
 - Forest-based recreation
- Energy
 - Biofuels
- Medicinal
 - Herbal and medicinal
- Provisioning Services
 - "Respondents felt that forests' primary role is as a contributor to environmental quality"
 - Clean air
 - Carbon Credits
 - Clean water
- Recreation
 - Camping
 - Hiking
 - Hunting
 - Motorized
- Restorative
 - A majority of Americans believe that forests are important to their daily lives.



All of that and more on 40 acres of land



Speaking of 40 acres of land...
Which would you rather have?



Management and Restoration...

- The art and science of growing trees...
 - Science: The knowledge of relationships between site resources and species and specific manipulations to achieve desired outcomes.
 - Art: The application of that knowledge to achieve a desired outcome
- The creation and maintenance of the kind of forest that will best fulfill the objectives of the landowner within the capability of the land.

Which would you rather have?

This stand has never been cut



This stand has been thinned regularly



Working with your forester...



- You can take stock of what you have and develop a management plan that balances the present condition of the property, what it is capable of producing, and your goals for your land.

Present Conditions

What have you got?



Where is it going?



Where do you want to go?

Site Capability



- Each site has its own peculiar set of environmental conditions affecting tree growth.
- Factors like...
 - Soil type
 - Available nutrients
 - Slope and aspect
 - Length of growing season
 - Precipitation
- ...determine vegetation growth and dynamics.
- Site capability affects tree growth, species composition and succession (plant community development).

Having a management plan...



- ***"Would you tell me, please, which way I ought to go from here"*** asked Alice in Lewis Carroll's *Alice in Wonderland*
- ***"That depends a good deal on where you want to get to."***
- Answered the Cheshire Cat.

Identifying your goals



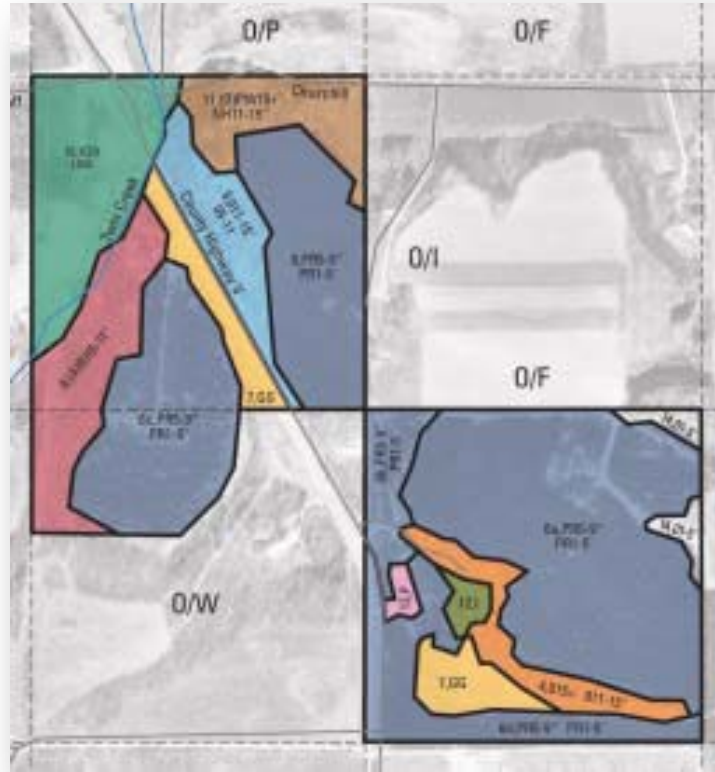
- What do you want from your woodlands?
 - Timber production?
 - Recreation opportunities?
 - Wildlife habitat?
 - Scenic vistas?
 - Something else?

Inventory your property...



- A forest inventory determines
 - Location of timber
 - Estimates quantity by
 - Species,
 - Potential product,
 - Size,
 - Quality,
 - and other characteristics
- An inventory can also assist in assessing other forest values such as
 - Wildlife habitat (mast species, crops, snags, wetlands, dens, nests, thickets, etc...)
 - Recreational opportunities
 - Any other management opportunities that may exist on your property

Establish stand specific objectives.



- Based on your goals for your woodlands
 - Identify those areas of your property match up best with your goals.
 - Some stands may provide many numerous opportunities while others may have limited potential.
 - Stand specific objectives focus your attention on those areas with the greatest potential to meet your goals.

Managing forests for fiber...



- Timber stand management is the process of encouraging growth on some collection of desirable trees.
- Density control is the primary means by which this is accomplished.

Crop Tree Management



- a thinning technique used to promote the growth of selected trees through the removal of less desirable trees.
- It does this by concentrating growth on the most desirable trees.

Reallocating wood...

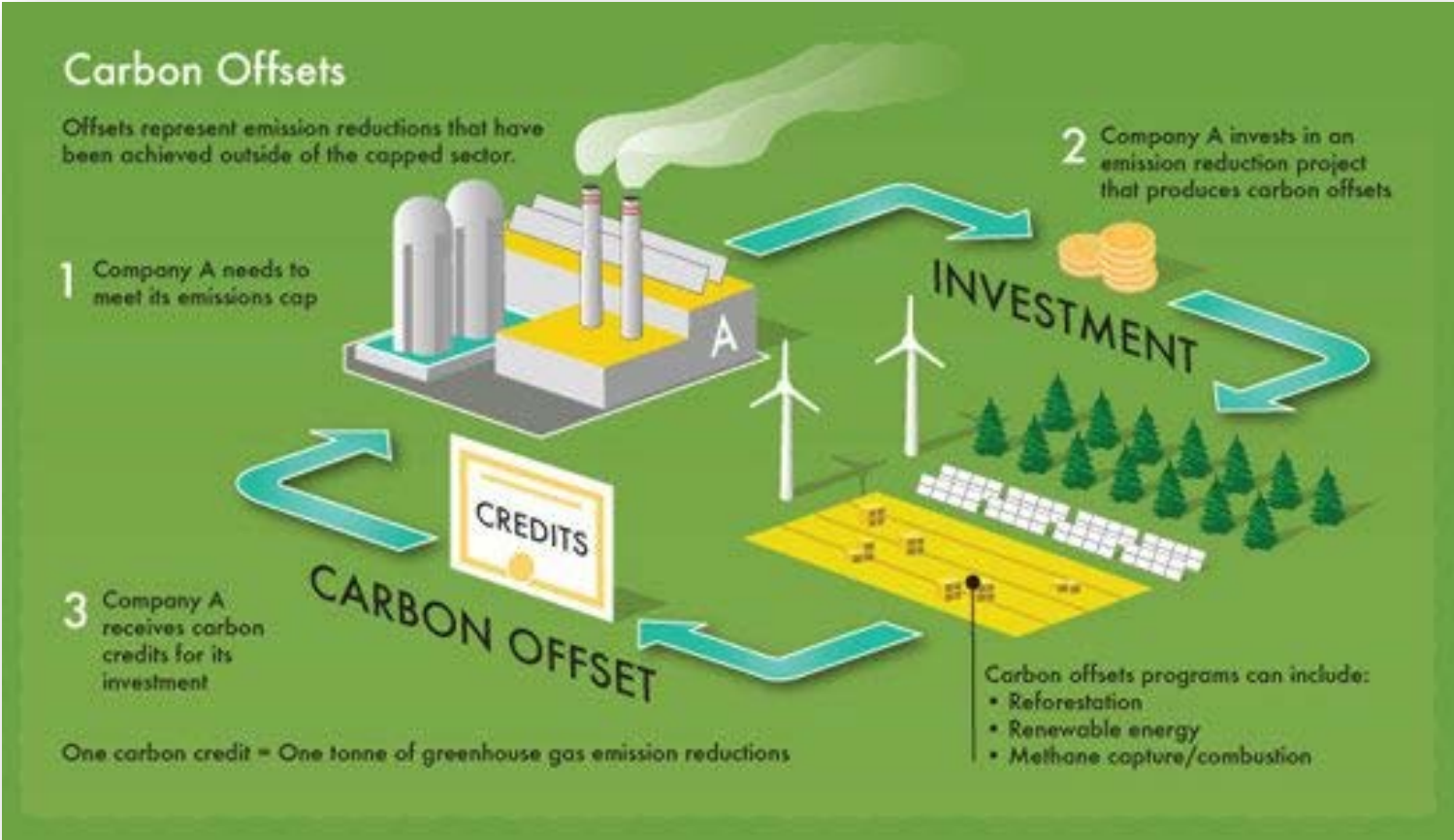
Wood production depends on complex interactions between tree crowns, stems and roots.



Criteria for timber production

- Dominant/co-dominant trees (at least 25 feet tall)
 - Healthy crown; large in relation to DBH
 - No dead branches in upper crown
 - U-shaped connections are acceptable. However, avoid V-shaped connections
- High-quality trees
 - Butt-log potential of Grade 1 or 2
 - No high-risk trees (leaners, splitting forks, etc.)
- High-value commercial species
- Expected longevity of 20+ years
- Species well-adapted to the site

Managing for clean air



Afforestation Projects

- Trees planted after January 1, 1990 on land formerly (10+ years) not in forest.
- Land protected for long-term forest management (conservation easement or contract)
- Demonstrate Sustainable Forest Management
 - FSC, SFI, American Tree Farm System
- No harvesting (including thinning).
 - Plantations that have been thinned must be enrolled as a Forest Management project.
- Carbon credits for above- and below-ground biomass Credits available for 2003-2010
- Projects need verification by approved verifier



Sustainable Forest Management Projects



- The Managed Forest Project option calculates carbon credits based on net average annual carbon sequestered.
- As the term net implies, you are given credit for carbon sequestered but must subtract any removals due to management activities (thinning or harvest).

Avoided Conversion Projects

- Credits awarded for standing carbon not deforested over time based on threat analysis.
- Based on likely effects of conversion as substantiated by an appraisal and similar regional practices
- Other required criteria include:
 - Suitability of project area for conversion
 - Legal permissibility of conversion
 - Assessment of risk of conversion as determined by disparity in value from appraisal



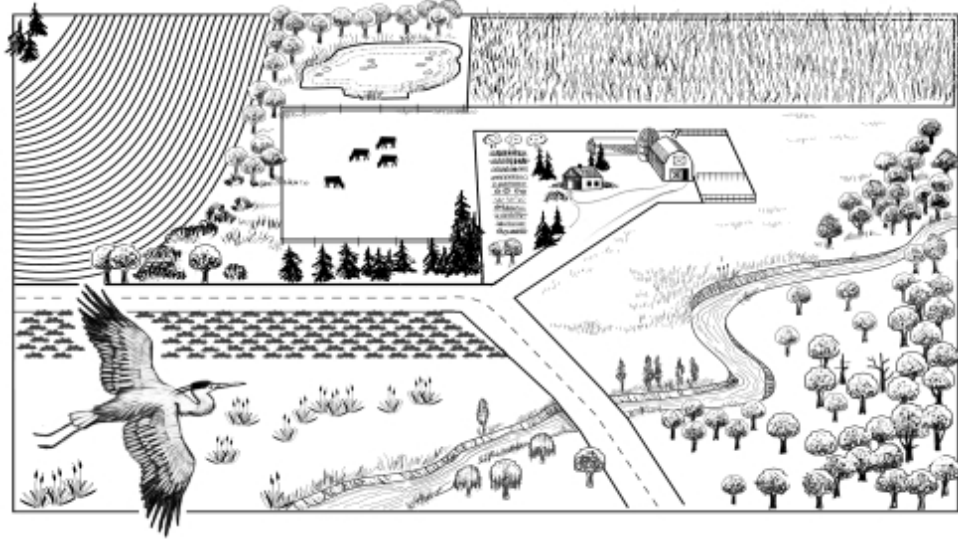
Managing for Wildlife



Define wildlife



Wildlife Habitat



- What wildlife species are of greatest interest to you?
- To attract and maintain wildlife populations insure that each element of that species' habitat exists in sufficient quantity and quality.

Wildlife Habitat



- Habitat is where an animal lives, eats, establishes and defends its territory, mates and produces offspring.
- The four components of habitat are food, water, shelter and space.

Food



Water



Shelter



Space



Criteria for wildlife habitat

- Trees and shrubs that produce fruit, nuts or berries:
 - Dominant/co-dominant trees
 - Healthy crown; large in relation to DBH
 - A few dead, upper-crown branches are acceptable
 - Hard-mast producers preferred over soft-mast producers
 - Strive for species variety
 - Cavities and large, broken branches are acceptable
- Cavity trees:
 - Trees of any species, size class, and crown position are acceptable
 - Dead, upper-crown branches and cavities in the main bole are acceptable

Aesthetics



- Beauty is in the eye of the beholder...
- But there are some things that you can do to create it.

What makes a forest beautiful?



- The trees of course!
- Things to think about include...
- Spring flowers
- Fall color
- Winter outline
- Mystery

- What else???

Spring flowers



Fall color



Winter outline



Mystery???



Criteria for aesthetics

- Select tree and shrubs that produce attractive flowers or colorful foliage
- Healthy crowns; large relative to DBH
 - A few dead, upper-crown branches are acceptable
- Visible from travel ways and adjacent to streams
- Unique trees (old pasture trees with spreading branches, unusually shaped trees, trees with attractive bark characteristics, etc.)

Water quality



- Forests improve water quality in many ways .
- Filter sediment and nutrients from runoff.
- Allow water to soak into the ground.
- Stabilize streambanks and lakeshores.
- Shade streams.
- Provide food and habitat for aquatic organisms.

Criteria for water quality

- Select trees and shrubs that are good nutrient accumulators
 - Young trees
 - Deciduous trees
- Trees tolerant to flooding!



Thoughts from a forester...



- "I have read many definitions of what is a conservationist..."
- "...and the best one is written not with a pen but with an axe."
- *Aldo Leopold*

Closing thoughts...

- Crop tree management is designed to increase the survival, productivity, and value of your woodlands by...
 - Reallocating site resources to the selected trees that will help you meet your goals.
 - Removing defective, low vigor, or low-quality tree species
- Specific activities include...
 - Planting of desirable species
 - Removal of competing vegetation
 - Thinning overstocked areas
 - Releasing crop trees

Questions???

