

Making a Plan for Your Woods

Oak in the Driftless Workshop

Dylan Bell, DNR Forester

September 29, 2018



Overview of Today

- ✱ Why a management plan?
- ✱ What is a management plan?
- ✱ What is in a management plan?



Why Forest Management is Important

- ✱ Ecologically healthy forests
- ✱ Best quality timber products
- ✱ Improved wildlife habitat
- ✱ Increased recreational opportunities
- ✱ Protect / enhance aesthetic qualities
- ✱ Better meet your property goals & objectives



Why Forest Management is Important

- ✱ Long term investment / commitment
 - ✱ Long life cycle
 - ✱ Spans many generations
- ✱ Coordination of multiple uses requires planning
 - ✱ All involved need to understand the goals
- ✱ All committed to process and outcome



Why is forest management important?

✱ No Management or mismanagement



- ✱ Unhealthy forests
 - ✱ Over-crowded
 - ✱ or poorly stocked
- ✱ Low quality (value) timber products
- ✱ Poor wildlife habitat
- ✱ Fewer recreational opportunities
- ✱ Aesthetic values compromised

Forest Management Plans

- ✱ A road map for your forest
- ✱ A “document: of your plans for your woodlands

Sustainable forestry is based on the idea that resource use should insure that current and future generations have functioning, resilient forests that can provide a wide array of benefits and resources.

Forest Management Planning

- ✱ The planning process will:
 - ✱ Help you learn more about your woodland
 - ✱ Consider your short and long-term goals
 - ✱ Evaluate environmental and financial benefits of managing your land



Forest Management is Based On:

- ✱ Appropriate silvicultural systems
 - ✱ Site quality and potential
 - ✱ Based on soil type & classification
- ✱ Condition of the current forest
- ✱ Specific landowner goals and objectives
- ✱ Costs and benefits

Silviculture is the science of producing and caring for a forest or woodlot by applying the principles of forest management within a sound economic framework.

Steps to a Management Plan

- 1) Find a forester you trust
- 2) Determine your goals and objectives for your woodlands
- 3) Take stock of your forest conditions
- 4) Determine what management activities are needed
- 5) Put everything into a written plan

Steps to a Plan: Find a Forester

- ✱ 3 types of Foresters
 - ✱ DNR Private Lands Foresters
 - ✱ Consulting Foresters
 - ✱ Industrial Foresters



Steps to a Plan:

Determine goals and objectives

- How do you use your woodlands?
- What do you want to get from your woodlands?

• Example of Potential Areas of Interest:

- Timber Production & Income
- Wildlife habitat
- Recreation
- Aesthetics
- Promote biological diversity



Write Your Goals and Objectives for your property

- ✱ **Property Goal:** A concise statement that describes a future desired condition normally expressed in broad, general terms that are timeless with no specific date by which the goal is to be achieved.
 - ✱ Periodic income from wood production and create optimum turkey habitat.
- ✱ **Stand Objectives:** Concise, time-specific statements of measurable, planned results that refer to overall goals
 - ✱ Plant evergreen trees in open field, regenerate aspen stand.

Write Your Goals and Objectives for your property

- ✱ Questions to think about. I would like ...
 - ✱ More income? If so when ...
 - ✱ More wildlife? If so what kind
 - ✱ A healthier and more attractive forest?
 - ✱ Improve recreational value? If so for what?
 - ✱ Improve quality of trees in forest? What kind?
 - ✱ Firewood?
 - ✱ Other? Plant trees ...

Steps to a Plan: Inventory

- ✱ Tree composition, structure, age, and health
- ✱ Understory composition and structure
- ✱ Site Types – Soil
- ✱ Topography/Feasibility
- ✱ Invasive plants, species and density

Management recommendations will be based on what is present on your site and what the site has the best potential for growing.

Steps to a Plan: Inventory

- ✱ Health & vigor, potential damaging agents
- ✱ Historic vegetation and disturbance regimes
- ✱ Level of deer browse
- ✱ Expected responses of vegetation management

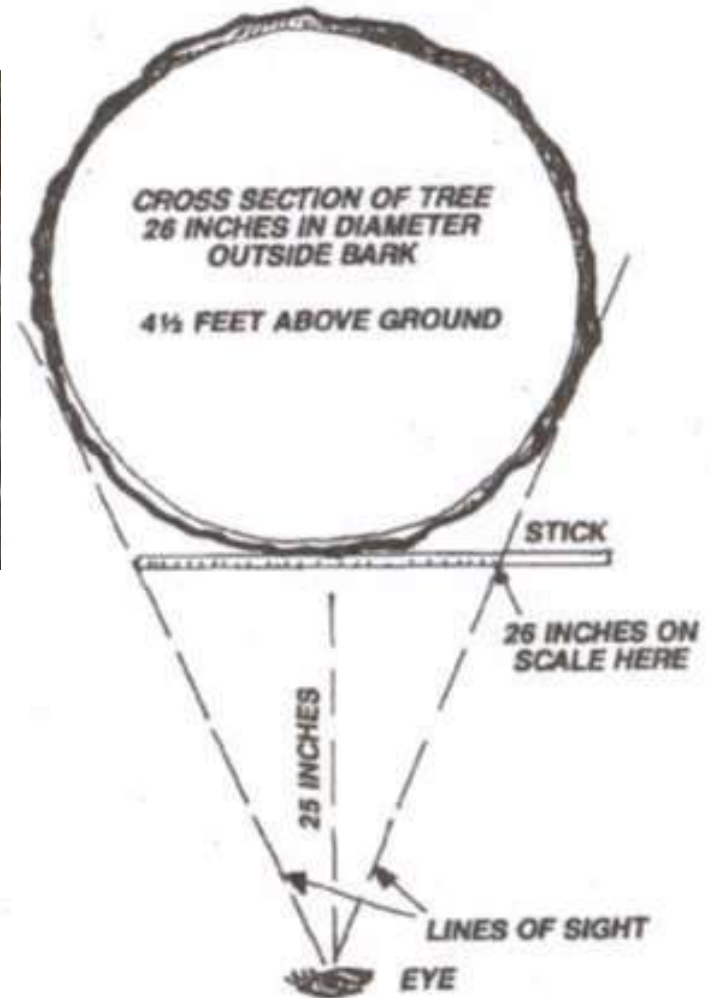
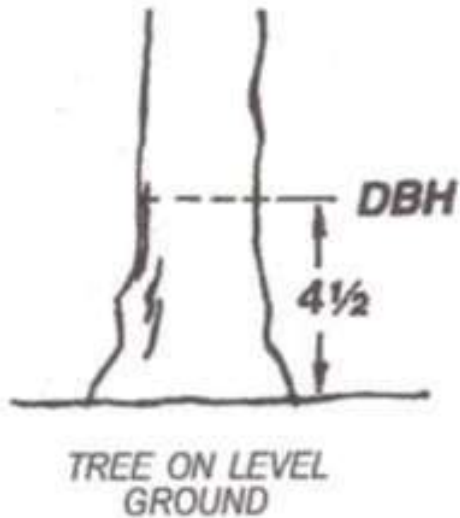


Steps to a Plan Inventory

“Reconnaissance”

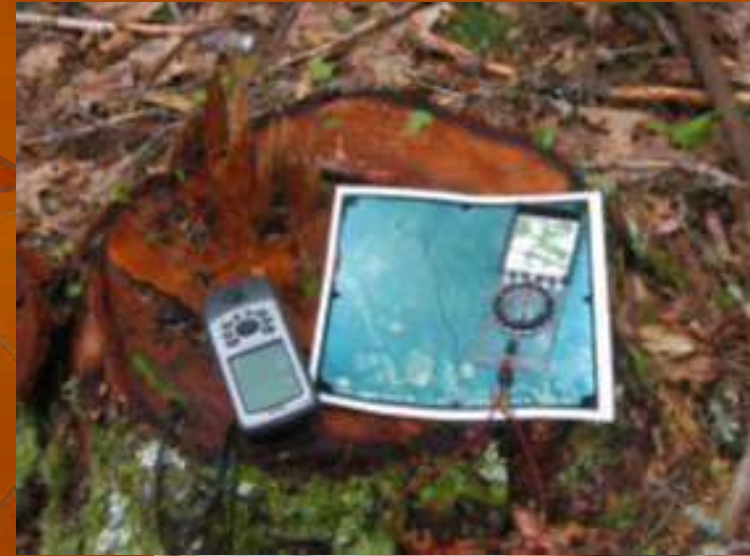
- ✱ A timber “cruise” is a systematic sampling of some trees in your forest.
- ✱ Data collected includes:
 - ✱ Tree species
 - ✱ Diameters & heights
 - ✱ Site index
 - ✱ Standard measure of stand quality
 - ✱ Age & growth rates of certain trees
 - ✱ Stand density & volume

Steps to a Plan: Inventory



DBH = diameter at
breast height = 4.5ft

Timber Cruise



Steps to a Plan: Inventory

- ✱ A forester may separate your woodlands into different stands.
- ✱ Stands are uniform in species composition, arrangement of age classes, and general condition



Example of Stand Description

Stand Number: 1
Forest Type: Northern hardwoods
Acreage: 20

Stand Description

Composition by basal area (ft²/ac): Total (Portion \geq 6" Dbh):

sugar maple 90 (75); yellow birch 20 (5); other 10 (5)

Total basal area: 120 ft²/ac

For trees \geq 6" Dbh: 85 ft²/ac

Site index (based on age 50):

70 ft. for sugar maple

Number of stems per acre: 255

For trees \geq 6" Dbh: 160 stems

Mean stand Dbh: 9"

Stand age: 70

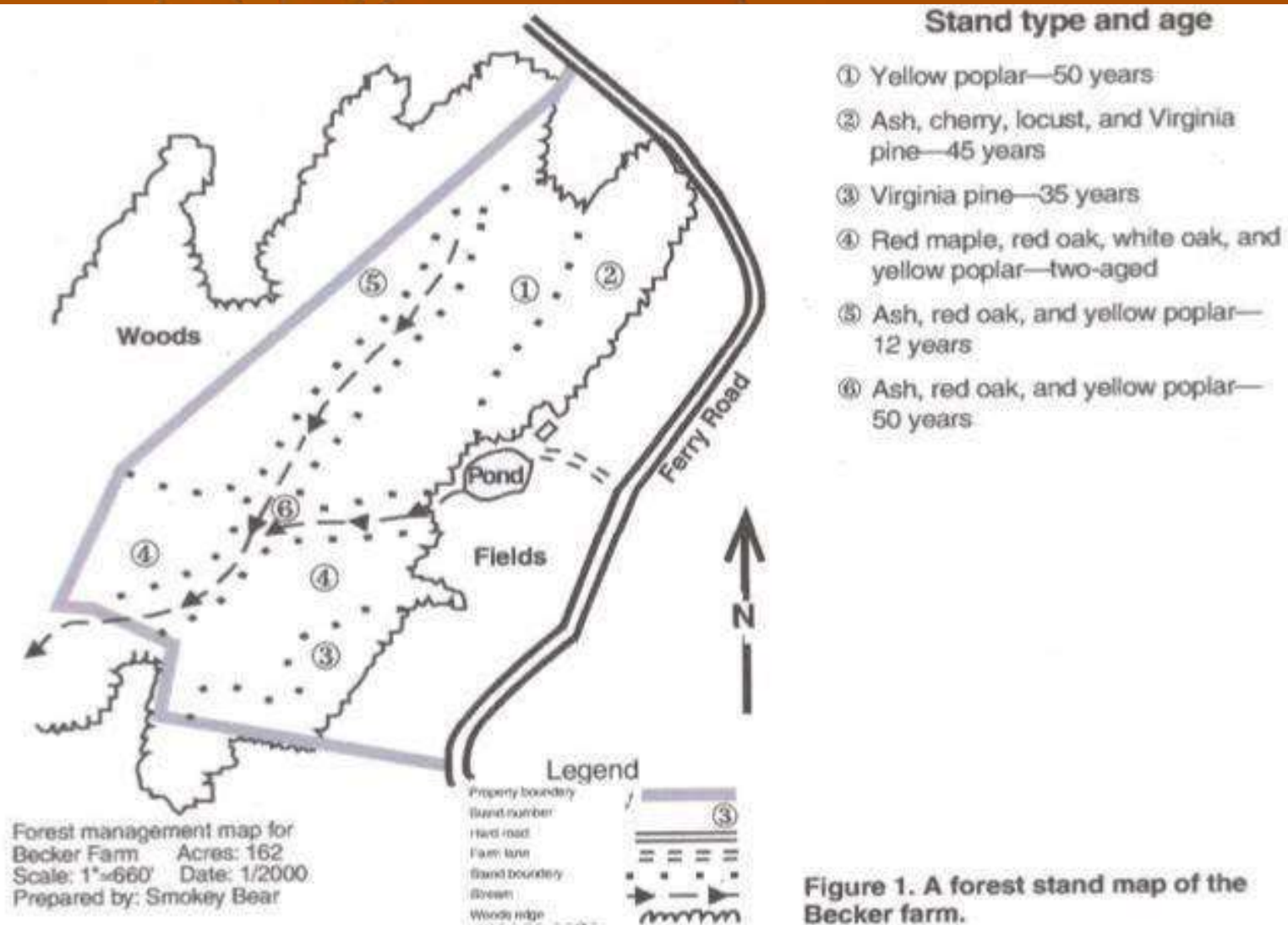
Average annual growth rate:

2.2 percent (+/- 0.2) on volumes

Stand Condition: Excellent; no evidence of any recent defoliation.

Understory: Maple regeneration is thick but small because of dense canopy; shrub layer is absent; buckthorn is present and represents a risk when stand is disturbed.

Steps to a Plan: Inventory



Steps to a Plan: Inventory

- Regional Ecological concerns
- Endangered or Threaten resources
- Cultural or archeological resources
- Recreation - trails
- Best Management Practices
for water quality
 - BMP's
 - Non-Point Source Pollution
 - Stream siltation



Steps to a plan: Management Activities

- ✱ List of management recommendations
- ✱ Timeline of specific activities
- ✱ Examples of activities:
 - ✱ Planting
 - ✱ Thinning
 - ✱ Timber harvest
 - ✱ Control of competition and invasives
- ✱ Could cover 10-50 years



Examples: Stands & Management

- ✱ Size: 24 ac
- ✱ Pole sized (5-11" dbh) mixed hardwoods
- ✱ Objectives
 - ✱ Long-lived healthy trees for timber
 - ✱ Maintain aesthetics by trail
 - ✱ Thin in 2 years and again in 18 years



Examples: Stands & Management

- ✱ Size: 10 ac
- ✱ Pole sized red pine @ age 24 years
- ✱ Objectives
 - ✱ Maintain plantation for sawlogs
 - ✱ Visual enjoyment on property
- ✱ Thin immediately and again in 7 to 10 years



Examples: Stands & Management

- ✱ Size: 10 ac
- ✱ Pole sized ash, cedar, hemlock in bottomlands
- ✱ Objectives
 - ✱ Maintain wildlife cover
 - ✱ Protect water quality
- ✱ Selective thinning now and again in 15-20 years



Examples: Stands & Management

- ✱ Size: 10 ac
- ✱ 45 year old aspen stand
- ✱ Objectives
 - ✱ Harvest at economic maturity
 - ✱ Encourage habitat for deer and grouse (Improve stand structure)
- ✱ Clearcut half of stand now and other half in 10 years



Examples: Stands & Management

- ✱ Size: 6 ac
- ✱ Open field; former hay field
- ✱ Objectives
 - ✱ Encourage wildlife habitat
 - ✱ Plant trees for future generations
- ✱ Management
 - ✱ Plant some areas with wildflowers and others with evergreens; keep some trails mowed
 - ✱ Consider establishing wildlife food crops / plots



Examples: Stands & Management Recreation

Before harvest



6 mos. after



2 yrs. after



Examples: Stands & Management Edge

Before harvest



6 mos. after



2 yrs. after



Examples: Stands & Management **Scenic View**

Before harvest



6 mos. after



2.5 yrs. after



Questions?

