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
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
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 ≥ 6” Dbh):
sugar maple 90 (75); yellow birch 20 (5); other 10 (5)

Total basal area: 120 ft²/ac
For trees ≥ 6” Dbh: 85 ft²/ac

Site index (based on age 50):
70 ft. for sugar maple

Number of stems per acre: 255
For trees ≥ 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

Stand type and age

1. Yellow poplar—50 years
2. Ash, cherry, locust, and Virginia pine—45 years
3. Virginia pine—35 years
4. Red maple, red oak, white oak, and yellow poplar—two-aged
5. Ash, red oak, and yellow poplar—12 years
6. Ash, red oak, and yellow poplar—50 years

Figure 1. A forest stand map of the Becker farm.
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?