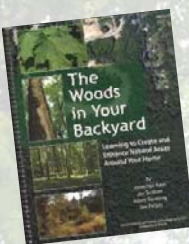




Welcome to The Woods In Your Backyard Workshop
January 15, 2011
 We will start at 9:00 a.m. sharp

www.naturalresources.umd.edu

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The Woods in Your Backyard
 Learning to Create and Enhance Natural Areas Around Your Home

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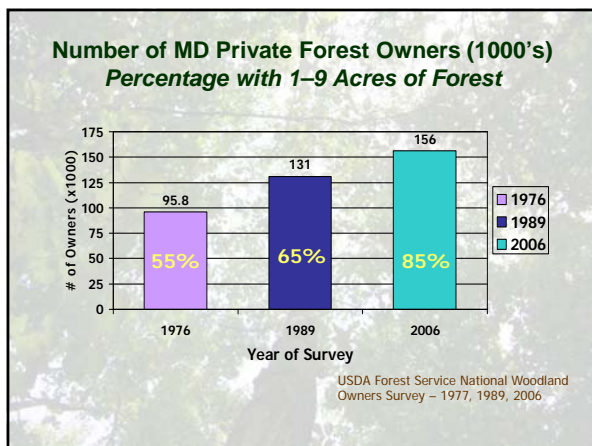
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UNIVERSITY OF MARYLAND EXTENSION
 "Educating People to Help Themselves"

Woodland Ownership Trends

- ↗ woodland owners
- ↘ ownership tract acreage
- short tenure of ownership
- new/different owner's (land ethic)
- The words we use:

Forests > Woods > [Natural Areas]

Landowners: part of the solution

- If neighbors cooperate...
- Everybody's actions influence water quality, air quality, aesthetics, etc.
- Every little bit of effort helps



Purpose of Course



Transition from mowed to natural use




Enhance existing natural areas

Manual Overview

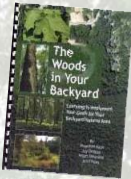
Table of Contents – pg iii

- **Part 1: Introduction: Assessing your interests in your land**
- **Part 2: Get to Know Your Property: In the landscape, identifying land management units, tree ID**
- **Part 3: Ecological Principles: Succession, forest principles, water resources, wildlife ecology**



Manual Overview

- **Part 4: Put Your Knowledge into Practice: recreation, aesthetics, choosing projects, land management techniques, timetable, & record your progress**
- **Part 5: Workbook used to assess the potential of your property**
- **Appendices: tables, resource list, glossary, index**




WIYB Manual Using a Learning Approach to Help You Develop a Plan

- Identify your interests
- Inventory your property
- Understand ecological principles
- Assess potential for forest, wildlife, water quality, recreation & aesthetics
- Choose projects
- Learn techniques
- Make a timetable
- Record your progress



Conceptual Framework of Looking at One's Property – Page 4

- **Three types of land use:**
 - **Intensive use** – buildings, sheds, paved areas, etc
 - **Intermediate use** – lawns, garden, pasture, orchard
 - **Natural use** – forested, unmowed areas with small trees & shrubs



Paired 3-acre plots



Natural Succession – Some Planting after 16 years

Intensive – Intermediate – Natural Use Areas

Natural Succession – Some Planting after 3 years



Nelsons' Property Map

Activity 1 (case study), Page 7 in manual

Lets do it now!

- Sketch Out Your Property (Activity 1)

Nelsons' Family Goals Assessment

	Agree	Disagree
I would like to have more natural areas and less mowed land.	T, E*	T
I do not understand what kind of land management projects are possible and what is involved with each.	E	T
I'm very enthusiastic about making changes to improve the land stewardship of our property.	T, E	
Any new land management projects are too much for us to handle now.		T, E
I am worried about how land management projects will affect our time for other family and/or personal activities.	T, E	
I am concerned that other family members do not understand what I value most about our property.		T, E
I believe we could handle the financial cost of carrying out some land management activities on our property.	T	E
It's important for us to learn to work the land, even if other activities have to be sacrificed.	T, E	
My opinions and feelings about potential new projects on the property are taken seriously.	T, E	

*T: Tim's response; E: Ellen's response

Summary by Ellen: Most of our concerns and enthusiasms match. But the project is really Tim's baby, so he will do most of the implementation work, with help from me when possible. We don't have a lot of extra time or money, but feel that they can tackle the work in small projects over several years.

Activity 3 (case study), Page 9 in manual

Homework!

What are Your Interests?

Activity 4, Page 10

Table 1 – Determine your Interests

Resource Benefit	Human Values				
	Income Production	Enhance Property Value	Personal Satisfaction	Privacy & Sanctuary	Reduce Lawn Mowing
Natural Area Improvement					
Forest Products					
Wildlife Habitat					1
Water Quality			2		
Recreation					
Aesthetics				3	

- Reduce time spent mowing lawn and improve wildlife habitat.
- Improve the water quality of Oak Creek.
- Improve aesthetic enjoyment and sense of privacy.

Potential Natural Area Improvement Projects

- Remove damaged trees and/or limbs
- Control exotic and/or invasive species
- Improve tree growth by thinning an overcrowded stand
- Plant trees

Potential Forest Products Projects

- Firewood for personal or others' use
- Ginseng or other medicinal plants from the natural areas of the property
- Grapevines for wreaths
- Shiitake mushrooms

Potential Wildlife Habitat Projects

- Create brush or rock piles
- Encourage growth of wildlife food trees
- Improve shelter opportunities by planting trees, brush piling or creating soft edge





Potential Water Resources Projects

- Establish or enhance forest cover around streams, seeps, springs, or ponds




Potential Recreation Projects

- Create or improve trails
- Create a campfire or camping area
- Create a natural-area haven (place to relax)
- Improve opportunities for hunting or wildlife watching




Nelsons' Constraints to Land Management

Activity 5 – Page 13

Investigate the Legal Constraints on Your Land

Easements – None

Rights of way – None

Covenants – The homeowners association covenants include a provision that grass not be more than a foot tall. This might prevent us from turning some of the lawn into a forested natural area. We figured our best chance of getting an exception to this covenant was accurate information and thorough planning.

Other constraints – None

**P.S. from Ellen: We continued to work our way through the exercises in this book, and when we were done, Tim presented our land management plan at a meeting of the homeowners association. He emphasized the benefits of improved water quality in Oak Creek and improved air quality and reduced noise pollution from less lawn mowing. In the end the homeowners association agreed to the plan as long as the lawn area to be planted in trees was at least 25 feet back from the road. We agreed to mow between the trees until the forest canopy closes.*

Part II Getting to Know Your Property

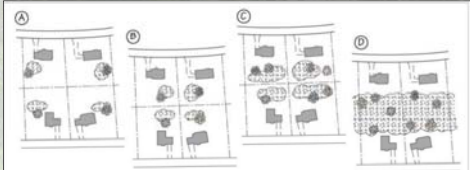
Inventory Your Property - Page 15

- Your property's in the landscape
- Surrounding properties
- Land management units
- Basic tree and shrub identification



Patch Characteristics Affect Habitat Value

Figure 2 – Page 18




- Patch size and proximity affect wildlife habitat
- Larger, closer, and connected habitat is more useful to wildlife
- Figure D above is best for wildlife; Figure A is worst

Expanding existing forest areas



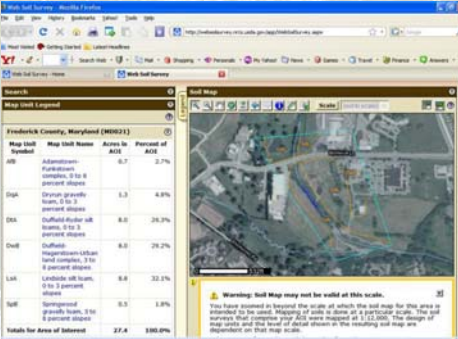
- The planting area on the left expands the existing forest buffer to. The aerial picture on right shows how planting could expand an existing forest area.

Google Earth view of Frederick County MCE office area



Soil Survey from Web Soil Survey

<http://websoilsurvey.nrcs.usda.gov/app>



Map Unit	Map Unit Name	Area in Acre	Percent of Acre
A08	Adamstown Parkhurst complex, 0 to 8 percent slopes	0.7	2.7%
D04	Drum granite loam, 0 to 2 percent slopes	1.3	4.8%
D04	Duffield silt loam, 0 to 2 percent slopes	8.0	29.3%
D08	Duffield silt loam, 0 to 2 percent slopes	8.0	29.3%
L04	Lynchville silt loam, 0 to 2 percent slopes	8.4	32.1%
S01	Springwood gravelly loam, 0 to 2 percent slopes	0.5	1.8%
Totals for Area of Interest		27.4	100.0%

Cooperate to Reach Your Goals



- You may not be able to provide all habitat elements needed by the wildlife species you desire, so...
- Cooperate with neighbors to achieve shared goals*

Examples of Land Management Units [or Habitat Patches]



Part 11, Lesson 2, Page 22

Designate land management Units

- Add units to hand drawn map or whatever type of map used.
- Tree identification basics



- ... mixed hardwoods of various species, medium-sized
- ... young aspens
- ... mature hardwood
- ... streamside riparian area (tall grass/thicket)
- ... lawn (plant to trees)

Activity 7, Page 23 - 24

Tree and Shrub ID

Part II, Lesson 3, Page 25

- What kind of trees and shrubs grow on your land?
- Use simple MD Leaf Key to start. Peterson's Guide to Trees and Shrubs a great resource. Many online resources as well.
- The "manual" covers the bare basics





The Nelsons' Most Common Tree and Shrub Species by Land Management Unit

Managed unit	Vegetation type	3 Most common tree species	3 Most common shrub species
1	mixed hardwoods	yellow poplar, hickory, oak, maple	dogwood, musclewood, green briar
2	aspen	aspen, yellow poplar	dogwood, green briar
3	mature hardwoods	red oak, hickory, yellow poplar	dogwood, cedar, service berry
4	streamside riparian area	n/a	raspberry, green briar
5	lawn	n/a	n/a

Activity 7, Page 23

Logging in Large-Lot Suburban Developments with a Good Forester







Use smaller and lower impact harvesting and processing equipment








Part III - Ecological Principles


Ecology: the study of natural communities and how they function and interact

- Principles of succession
- Principles of forestry
- Water resources and your natural area
- Principles of wildlife ecology



The Dynamic Natural Area: Principles of Succession

1. Natural areas change over time, whether or not you do anything to them.
2. You can alter the process of succession
3. Tree vary in their requirement for sunlight.





**Tree Planting:
Push succession
ahead**

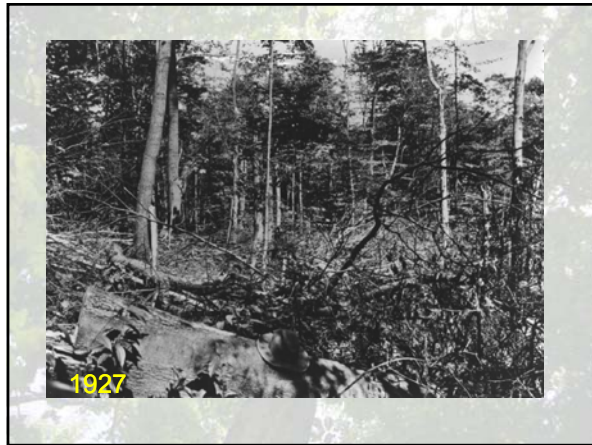


**Forest Harvesting:
Push succession
back**

Succession Principle 3

- Trees vary in their requirement for sunlight.

Shade Tolerance of Some Common Eastern Trees		
Shade-tolerant	Intermediate	Shade-intolerant
Beech, American	Ash	Aspen, quaking
Blackgum	Birch, sweet	Birch, gray
Cedar, Atlantic white	Birch, yellow	Birch, paper
Dogwood, flowering	Cherry, black	Cedar, eastern red
Hemlock, eastern	Hackberry	Larch
Hickories	Magnolia, cucumber	Oak, pin
Maple, red	Oak, northern red	Pine, red
Maple, sugar	Oak, white	Pine, shortleaf
Sourwood	Pine, eastern white	Pine, Virginia






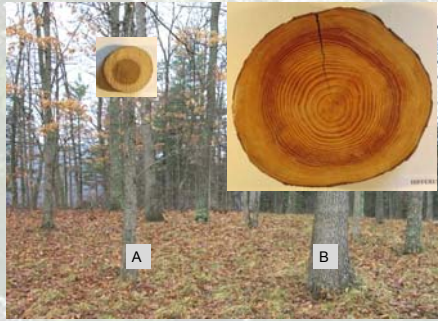
Different stages of succession represent different habitat patches (i.e. mature forest, old field, young forest, etc)

Forestry Principles: Getting Down to Basics

1. Tree size not directly related to age
2. Different tree species require different conditions
3. Trees grow at different rates - compete for resources (i.e., sunlight, water, and nutrients)
4. Forests are 3-dimensional



Tree Size and Age




Which tree is older? A or B?



The trees that are most successful in the competition for light outgrow and overtop the others

Forestry Principles: Getting Down to Basics

5. Trees reproduce either from seeds or sprouts
6. Trees don't live forever; dead trees valuable for wildlife and soil
7. No matter how you manage your land, but especially if you practice passive management, invasive and exotic species will inhabit it.



Invasive and natural species can take over. Especially in early succession



Grapevine

Kudzu

Learn to Identify Invasive & Exotic Species




Improving Wildlife Habitat Value

- Natural areas will increase food, cover, water, space
- Get across the message, 'Messy is okay'
- New natural areas will attract wildlife that will increase wildlife-human conflicts (i.e. deer)



Wildlife/Human Interaction



www.lincolne.com

Providing and Enhancing Habitat Elements

To increase the amount and/or variety of wildlife you host

- Brush piles
- Dense thicket
- Edge
- Forest openings



Mowing for awhile...but then let it go



Tree plantations when established can be mowed for a few year to assure establishment but then let it go. Otherwise the wildlife, water quality, and other benefits will not be realized.

Habitat Elements on Your Land

Activity 15 – Page 53

Special Section on unanticipated issues with wildlife - Pg 54

- Deer
- Cats

Management goal	Value relevance	Wildlife and habitat elements	Recreation	Aesthetics
1	High	Large oak and hickory for hard mast. Some tree canopy forest. Rocky areas provide habitat for small mammals. Hard edge with adjacent lawn. Few shrubs. Lack of ground vegetation due to deer browsing.		
2	High	Living oak as early successional habitat as canopy closes and ground vegetation disappears.		
3	High	Canopies in soft tree (oak) at back corner shed and soft mast from other trees. Several shrubs. Many openings, woodpiles, and other birds.		

Activity 17
How Could You Improve Your Natural Area's Aesthetic Appeal?

Table C: Assessing Your Land's Potential

Management unit	Water resources	Wildlife and habitat elements	Recreation	Aesthetics
1	none	Large oak and hickory for land most. Some tree species listed. Rocky areas provide habitat for small mammals, birds, and other wildlife. Lots of ground vegetation due to deer browsing.	Small butterflies, many deer trails.	Good size of leaf color along stream edge because we have managed to keep brush clear. Includes trees and shrubs that have great fall color. If planting soft edge along stream.
2	none	Lacking value as early recreational habitat as stream runs and ground vegetation disappears.	Small butterflies, many deer trails.	Pretty fall color from sugar trees.
3	none	Conifer or soft tree. Small of both stream bank and soft forest. Several large, many species, woodpeckers, and other birds.	Small butterflies, many deer trails.	Large trees are desirable and provide lots of wildlife viewing along adjacent stream bank. A few large, open, understory grounds for a natural home for wildlife.
4	Oak Creek is a small year-round stream. Lots of high, rocky banks in stream. Fall color is good. Many species of fish, many species grow along the stream.	Water from stream provides for wildlife and amphibians. Food and cover from stream and stream banks. Many species of fish, many species grow along the stream.	Old fire scars, many stream that has not been used in years.	Stream is pretty but area nearby gets muddy and messy with of many bushes.
5	none	none	hard games with family and friends.	Green grass attracts deer and rabbits. Plant some of area to have for more ground.

Recreation & Aesthetics

Choosing Projects

Identify and Rank Your Objectives

	Personal objective	Rank selected objectives
Natural area improvement		
I have a grass field or lawn I want to plant in trees	X	1
I want to manage woods and/or stream riparian	X	
I want to improve the health of my natural area		
I want to improve forest regeneration (new reproduction)		
I want my trees to grow faster		
I want to cut damaged dead or damaged trees	X	
I want to cut trees that are struggling and/or weighing down my trees	X	
Other:		
Forest products		
I want to use firewood for myself or others		
I want to start a forest products enterprise for fun and a little extra money		
Specific enterprise of interest:		
Other:		
Wildlife habitat elements		
I want to create some snags for woodpeckers and other cavity-nesting animals		
I want to create a soft edge between my lawn and forest to improve wildlife habitat diversity	X	
I want to provide some shelter and/or food for wildlife	X	
I want to have more riparian and amphibians	X	2

Menu driven table helps landowners identify & rank objectives with some suggested broad project ideas. Similar table for other objectives

Land Management Techniques
"Taking forestry to the backyard"

- Best management practices
- Brush piles
- Create campfire area
- Firewood cutting
- Food plots
- Mast trees
- Tree planting
- Trails & roads
- Much more...



Application of Common Forest Management Techniques



Firewood thinning



Creating a snag by girdling



Planting trees with shelters for deer protection



Learn to look up



Learn how to use equipment safely

Make a Timetable – Spell out Details
Lesson 5, Activity 19, page 74

Management unit	Goal	Project description (Provide details and step-by-step activities)	Priority	Start date	Project completion date	Who will do it?	Cost estimate
5-lawn	convert to trees	Use Roundup herbicide on the grass in the fall before planting in the spring. Use trees and shrubs that flower and/or have great fall color and/or produce wildlife food to reforest lawn in front of garden. Seedlings will include yellow poplar, black walnut, red oak, black cherry, and white pine. Order bare root seedlings from state nursery in late fall. Plant on a 10' x 10' spacing in this 3/4-acre area (1,225 trees). Install a tree shelter and a wooden stake around each seedling to protect it from deer browsing. Respray the grass between the rows with herbicide in the summer after planting, if needed. Mow between the rows until forest canopy closes because of homeowner association rules.	1	This fall	end of spring 3 years from now (split plot in thirds so the cost and time required per year are less; start closest to the road)	mainly Tim with help from Ellen	\$300 for plants of ~\$1.35 per plant; \$100 for Roundup herbicide and backpack sprayer; \$900 for shelters and stakes at \$4-5 each
4-riparian area	plant a riparian forest	Plant trees and shrubs (~440) recommended for riparian buffers throughout area currently in fall grass and thorny shrubs (1 acre). Plants will include river birch, green ash, sycamore, red maple, dogwood and buttonbush. Use tree shelters as described above. Mow grass before planting and frequently thereafter until trees establish. Do not use herbicide next to the stream.	2	next fall	end of following spring	mainly Tim with help from Ellen	\$400 for plants; \$2,200 for tree shelters and stakes

Record Your Progress

Lesson 6, Activity 20, Page 76

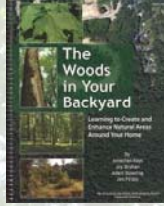
Activity 20
Record Your Progress

Management unit	Project	Date completed	Actual cost vs. projected cost	Comments
5-lawn	Conversion of lawn to trees	-	N/A vs. \$1,300	Almost finished. So far cost is a little less than projected.
4-riparian area	Plant riparian forest buffer along Oak Creek	spring 2006	\$3,000 vs. \$2,800	Completed. Cost was a bit more than projected because we slightly underestimated the number of plants needed.
throughout property	Create a trail throughout property	fall 2005	\$68 vs. \$45	Completed. Cost was a bit more than projected because we added some trail drainage features. Finished work two seasons after we planned to, but we are now happily using the trail with the kids.
4-riparian area	Enhance habitat for reptiles and	summer 2005	\$125 vs. \$100	Completed. Cost was a bit more than projected because plants were more expensive than expected. Have seen turtles here

Important: Take pictures...

WIYB Manual A First Step

- 138 pages
- 91 photos
- 20 activities
- Case studies
- Workbook



Resource CD for Volunteers available for download

Published by Natural Resource, Agriculture, and Engineering Service (NRAES)

www.nraes.org

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Use the Workbook & Resources to Do Your Property

Part V, Page 79



- Workbook – Pg 81-104
- 2 more case studies
 - The Lees – Pg. 105-111
 - The Rothmans – Pg. 112-119
- Appendices – Pg 121-130
 - Characteristics of trees, wildlife food, habitat requirements, tree & shrub uses & requirements
- Resource List – Pg 131-136
- Glossary – Pg 137