

## **BACKYARD WOODLOT OWNERS: A GROWING ISSUE AND NEW APPROACH**

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### **ABSTRACT**

As populations expand into rural areas, the Eastern United States, particularly, is experiencing forest fragmentation and parcelization. This process creates major challenges for natural resource managers, as rural forest and agriculture land convert into suburban developments. Meeting the diverse ownership objectives on these smaller forestland parcels, which do not often focus on timber production, requires innovative and sophisticated methods of communication to convey both the benefits and responsibilities associated with land stewardship.

Landowners with less than 10 acres of forest own 59% of forest properties in the Eastern United States. While the overall acreage of this audience is still relatively small (8%), they represent a growing underserved audience and a significant political base that could provide support for forestry programs.

Forests in this changing landscape can provide myriad environmental benefits to society as well as raw materials for forest industry. Landowners who believe non-management is the best management practice do not think about their connection to natural resources, or they have insufficient information for making informed decisions about improving the ecological function of this evolving urban landscape. As a result, landowners do not understand the intrinsic benefits gained from managing their forestland, no matter how small. A new educational tool and approach entitled, "The Woods in Your Backyard" is available to encourage small acreage landowners to understand their role in conserving forest values and to lead them to more active involvement with their natural resources.

### **INTRODUCTION**

Today's most underserved forest landowner audience is the majority. Small acreage forest owners account for the vast majority of owners in the United States and especially in the Northeast and Southeast Regions. Landowners with less than 10 acres of forest own 59% of forest properties in the Eastern United States (Butler and Leatherberry 2004). While the overall acreage of this audience is still relatively small (8%), they represent a growing underserved audience that could be a significant political base in support of forestry programs (Eagan and Luloff 2000, Hull et al. 2004). At the

rural/urban interface the percentage of land held in small ownerships can be significant. A recent study in Pennsylvania found that 54% of the forestland in Berks County near Philadelphia was in ownerships smaller than 10 acres. Using statewide average ownership sizes previously estimated that Berks County had 9,400 owners, newer more precise estimates suggests there are nearly 27,000 forest owners in this urbanizing county (Metcalf et al. unpublished).

Traditionally, Natural Resource Professionals have stood on the sidelines watching as Private Forest Landowner (PFL) characteristics have gradually but drastically changed. We have a “new” type of landowner and new resource challenges.

### The “new” landowner

Most forestland in the United States is owned by Private Forest Landowners (PFLs). In the 17 southern states, for example, 59% of the 215 million acres of forestland is in PFL ownership (Butler and Leatherberry 2004). Historically, these PFLs have met most of society’s fiber needs. However, as our nation’s population has become increasingly affluent and older, many people have chosen to follow the American Dream of land ownership. Through this process, the finite supply of land is under increasing pressure and we find that parcelization is rampant.

In the Southern Region, for example, the average forested tract size in 1978 was 45 acres and by 1994 the average dropped to 38 acres (Birch 1996). The next 10 years dropped another 10 acres from the average. In a 2004 survey by Butler and Leatherberry, the average forest ownership size was 28 acres for PFLs in the Southern Region (2006).

In general, small acreage landowners compared to larger landowners cite ecologic and amenity values as ownership objectives more frequently. This differs little from the common ownership objectives of forest owners nationally, which are aesthetics, privacy and family legacy. One major difference is that, when those who harvest firewood are excluded, the less forestland owned, the less likely it is that the owner will harvest trees for timber (Butler and Leatherberry, 2004). This reinforces the contention that education for smaller acres owners should focus less on timber production and extraction, and more on the other values mentioned above.

Kendra & Hull (2005) found that new, small acre, forest owners in Virginia were most motivated by lifestyle concerns such as living simply, near nature and escaping the urban stress. They have interests in growing their own food and recreating on their land. They express less interest in financial considerations when deciding what to do with their property. Yet, they are not necessarily preservationist desiring to leave the land “pristine.” For example, management tools such as herbicides, tree pruning and harvesting are options these landowners would consider using to improve wildlife habitat, forest health, and scenic views. Kendra and Hull (2005) found that landowners cite many reasons for not managing their land, such as, they never thought about it, time and money limitations, parcel size, and lack of knowledge. Many of these can be addressed through information, demonstration, consulting, and outreach programs.

Clearly, segments of the new forest owner generation offer new challenges and opportunities for resource managers and educators. While these individuals most likely tend to look inside their boundaries, the decisions they make have ecologic, economic, and social impacts across the landscape. In this regard, resource professionals should recognize they have a role with this new clientele. Scaled down traditional forest management approaches may work in some cases, but there is a need to restructure both our ideas and approaches. Hull et al. (2006) suggest that the management of these lands is important for the environmental services they provide and because these owners are politically active. If educators and professional foresters are to remain relevant, they must be proactive in making the changes necessary to serve this growing audience and the resources they control.

### The issue

Unfortunately, land parcelization in general and forest parcelization specifically are legacies of our heritage. The settlement of our country was largely driven by the individual desire for land which was readily within the reach of the commoner. Our transportation systems, recreation demands, economic success, and individual needs and social expectations exacerbate land consumption. Numerous studies and reports document, quantify, and articulate the potential threats of our land resource consumptions (Egan & Luloff 2000, Macie et al. 2002, Sampson and Decoster 2000, Vince 2005, Wear 2002).

Resource professionals have the training to understand the effects and ramifications of landscape fragmentation – the breaking apart of systems as we impose varying land uses. These same professionals find frustrations in the parcelization of the land – the separation of land into different ownerships where objectives, if not land use, change and vary by owner wants and needs. Whether we fragment or parcel the land, the potential to adversely affect forest and ecosystem health, economic structures, and future management are enormous. Resource professionals need to respond by encouraging responsible stewardship to traditional owners and to the new tenants of the land.

### The void

There are voids to address. In the East, less than five percent of PFLs have a written management plan and only about 14 percent have sought management advice in the past five years (Butler and Leatherberry, 2004). Without a plan, or professionally offered advice, the likelihood any management let alone sustainable management decreases. The statistics for small ownerships, less than 10 acres, is not explicitly known; however, we do know that large acreage owners are more likely to have a written management plan and seek advice (Butler and Leatherberry, 2004). Perhaps a larger question is the necessity of written forest management plans for small acreage landowners where timber harvesting and large scale disturbance is unlikely. It is more likely that a better understanding of basic ecological and management techniques along with a local support network may result in the implementation of better stewardship practice.

The importance of private forestland ownership is indisputable. Increasingly, stakeholders from diverse perspectives recognize the role they play in providing ecological services to the public. The traditional economic benefits remain, but often there is increasing recognition of the social and ecological values forests provide. Because of ownership patterns in the East; this places a large emphasis on the private forests. In the past, governmental incentive programs focused on the timber base encouraging forest owners to manage for products. Recent programs expanded the discussion to wildlife, water, and recreation. The Forest Stewardship Program, launched in 1991, is one of the most recent federal initiatives to assist PFLs with management. A principle stewardship goal is to provide PFLs with management plans to guide their decision making. In the first six years 329,000 forest owners controlling 16.5 million acres received help to reach their goals through economic assistance in planning and education (Esseks and Moulton 1999). Unfortunately, this valuable program targets forest owners owning more than ten acres leaving smaller acreage owners with no publicly-supported source of technical or cost-share assistance.

Why was the threshold set at 10 acres? Resource professionals (read that as foresters) argued that smaller ownerships are too difficult to manage – it is inefficient. Can we afford this luxury? Weir and Greis (2004) argue that we have to change our perspective and reach out to the landowner of smaller forests if we are to continue to meet societal needs. The reliance on the one-on-one model of technical assistance presently used to assist forest owners is not plausible for the multitude of owners in the fragmented landscape.

With the current base of service providers and assistance programs small acreage landowners rarely come in contact with resource professionals. This void calls for a variety of new tools, including educational material for small acreage forest owners that, to begin with, enables them to develop their own plan. Also needed are educational resources and opportunities to assist them with implementation of practices. Cooperative Extension and agency partners are well situated to meet this educational void of small acreage landowners with some of the new tools becoming available. Perhaps the more challenging part is the current lack of service providers adept at working with the audience.

While train the trainer programs can provide local education delivery and mentoring and it is a proven cost-effective way to leverage limited forestry resources for landowner education, something different is needed to train potential service providers. New forestry education programs targeted to professionals that currently work on these types of properties, such as home/landscape and arborist professionals, can help to equip them to take advantage of the business opportunities that servicing this clientele can provide. Along with training opportunities for existing forest professionals such as loggers, foresters and other natural resource professionals, a whole new cadre of service providers can be developed to fill this void.

## **METHODS**

The objective behind the Woods in Your Backyard project was to reach small acreage landowners (1-10 acres) with research-based information to help them create or enhance natural areas while meeting their personal goals and improving their property's contribution to ecosystem health.

The initial grant from the U.S. Fish & Wildlife Service developed a team approach by Maryland, Virginia, and Pennsylvania Cooperative Extension systems along with a professional writer and targeted the Mid-Atlantic region. The authors initiated the project in early 2003 with publication of the manual in September 2006. While there was one initial meeting of the authors in early 2003, all other communication was done by conference call and email.

### Approach

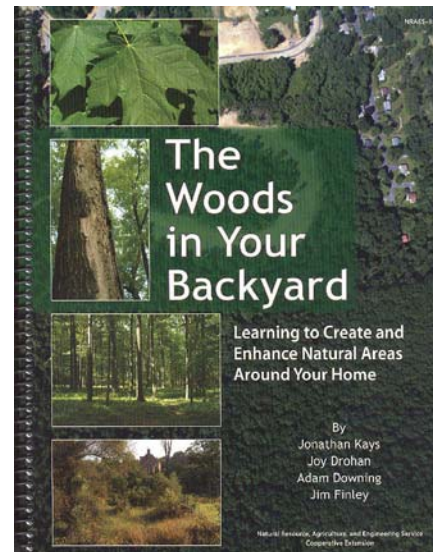
The first step was to define an approach to reach small acreage woodlot owners. Knowing that there are increasingly more of them, and relatively, if not actually fewer of us, we adopted a train-the-trainer model. The Master Gardener and the newer Master Naturalist programs are excellent examples of extension programs using this approach.. Even in the forestry field there are excellent examples of success using this model (i.e., Coverts, Master Woodland Owners and Forest Steward Volunteers) which have had significant success reaching a greater number of PFLs through a trained volunteer network than by solely relying on trained professionals.

The train-the-trainer model simply attracts interested citizens to participate in training programs with the agreement that they will share information with others in a peer learning approach. Efforts are made to select individuals who are opinion leaders in their communities, have a record of volunteer involvement and are willing to commit some time to the effort. In practice these individuals have access to networks and opportunities that could never be accessed by trained professionals, resulting in the dissemination of information by credible citizens in the community that is valued and implemented.

### Tool

After choosing an approach, the authors began crafting the “tool” for training volunteers. However, we soon realized that the product envisioned would also serve as a stand alone product for independent use, or self-assessment. “**The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around your Home**” is the end result. Development proceeded using the following principles:

- Utilize a case study approach



- Focus on better management of existing natural areas & conversion of lawn into forest
- Focus on non-timber values
- Require no forestry tools or previous knowledge and utilize user-friendly jargon
- Provide support materials for volunteers who do delivery & mentoring
- Include a separate workbook for personal assessment of the users property
- Design the publication to be used to guide group education and outreach efforts with new extension audiences
- Assume the user has Internet access to find needed resources and make those resources available at a specific website

Before publication, we sought input from landowners in forestry volunteer programs and state agency foresters and wildlife biologists in Maryland, Pennsylvania, and Virginia. Using a focus group format, we found support for the case-study approach used in the publication and received many useful comments on perceived gaps in the presentation. We found this investment of time to reach out to potential user's generated great excitement by those involved and was a huge success. The publisher, the Natural Resource, Agriculture, and Engineering Service Cooperative Extension (NRAES), orchestrated a more formal peer-review to further refine the manuscript with input from volunteers and professionals representing a cross-section of the Eastern United States.

## RESULTS

*The Woods In Your Backyard* (Kays et al. 2006) uses a case-study approach to guide users through a process of creating their own plan while learning basic forest stewardship concepts. Table 1 presents to the headings for the four major parts of the publication and incorporated workbook in part five.

Table 1. Publication contents

Part	Theme	Lessons
1	Introduction	<ul style="list-style-type: none"> <li>• Identify interests and mapping</li> <li>• Family involvement</li> <li>• Constraints to management</li> </ul>
2	Property Inventory	<ul style="list-style-type: none"> <li>• Landscape view</li> <li>• Management unit identification</li> <li>• Tree &amp; Plant identification</li> </ul>
3	Ecological Processes	<ul style="list-style-type: none"> <li>• Succession</li> <li>• Principals of Forestry</li> <li>• Water resources</li> <li>• Wildlife ecology</li> </ul>
4	Putting Knowledge to Practice	<ul style="list-style-type: none"> <li>• Recreation &amp; aesthetics potential</li> <li>• Choosing projects</li> <li>• Land management techniques</li> <li>• Timetable of activities</li> </ul>

		<ul style="list-style-type: none"> <li>• Recording progress</li> </ul>
5	Workbook	Twenty activities completed while working through the first four sections and in tandem with a case study

While there are three case-studies in the publication, the users follow the Nelson’s story throughout the manuscript. When we introduce activities (which could become homework assignments, if the trainer chooses to deliver the material as part of a multi-day program) “The Nelsons” serve to demonstrate the results of their activity. For example, Activity 1 is to draw a property map and the publication highlights the Nelsons. For Activity 2 we ask the user to describe property features using a worksheet and present the Nelson’s example to help the user become more comfortable completing the activity for their property in the workbook portion of the publication.

Users who work their way through the material will have, in the end, a self-designed plan, with research-based input, to help them accomplish their goals in a sustainable and ecologically sound manner. It is likely that users may only complete the parts of the plan they see as relevant, but regardless, there are adequate case studies upon which they can make their assessment.

To date, this material has been used to train nearly 150 volunteers in Virginia, Maryland, and Pennsylvania. Early follow-up results from trainings indicate the volunteers are using the materials for their own properties and for working with others.

Because each group trained is different, we created tools for customizing training. Experience suggests that professionals gain familiarity with the material quickly (under an hour), while lay audiences usually require 1.5-2 hours of training to reach a comfort level with the publication and training materials. The training materials consist of the publication and a CD that includes an overview PowerPoint (PP) presentation that can be adapted for different audiences, as well as individual PP presentations that breaks the materials into five classes and provides additional photos and information above that found in the manual. All these PowerPoint’s can be used as is, or edited by the individual as long as they have the PowerPoint program.

The CD also includes a press release, brochure, ordering information, fact sheets from Maryland, Pennsylvania, and Virginia Cooperative Extension and other organizations, as well as we blinks to other resources. One component of the manual is a resource list with websites for more information on specific topics (pages 131-138). This resource list is found on the website as a Word document with all the websites hyperlinked, eliminating the need to type in long and cumbersome web addresses. While the CD is only provided at certain trainings, and not with the publication when purchased, all resources found on the CD are available free for download at: [www.naturalresources.umd.edu](http://www.naturalresources.umd.edu).

While targeted to the Mid-Atlantic region, the manual has application to most areas of the country. Extension and other natural resource professionals can use the core manual and

adapt the resource list, PowerPoint presentations, and other CD resources to suite their respective area.

## **DISCUSSION**

Research into adult learning and the use of information by adults suggests that self actuation – wanting to learn and to solve their own problems is important and leads to higher levels of implementation (Knowles 1984 and Allman. 1983). Extending these concepts central to adult learning, also know as andragogy, we believe it is useful to engage landowners in developing their own plans, which should lead to higher implementation levels. We set out to create a tool for owners of smaller tracts that they would find useful in a guided planning process. We believe that we have a need to reach out to the “new” landowner to provide educational materials that they can use to guide their stewardship of land. We also believe that we lack the capacity to lead this process using traditional materials and approaches. Therefore, we offer that Woods in Your Backyard is an approach that people will find useful and provide us the means for guiding decisions that will affect economic, ecological, and social returns from the forests in a changing landscape.

“The Woods in Your Backyard” is a tool for reaching a currently underserved audience with both management information and mechanisms for designing their own plan and putting it into action.

## **CONCLUSIONS**

While “The Woods in Your Backyard” is a step forward reaching out to small acreage landowners, it is only one step. We do need to train service providers. The audience’s socio-economic traits suggest they would be willing to pay for professional assistance to achieve their management objectives (Hull et al. 2004). Trained service providers might have credentials and experience in a variety of areas such as raw material extraction (logging), resource management (forestry & wildlife), and home landscape care (arboriculture and/or horticulture). There is a clear need for individuals with a mix of skills who can work in the context of myriad ownerships and objectives. We need individuals with the traditional natural resource management skills, but in the situation where we see value for “The Woods in Your Backyard,” they require a set of new skills. They have to have the ability to build trust (Hull et al. 2004) with this new clientele.

Professional training to prepare the different groups of professionals with the skills they need to work with this audience are not yet available. It will require that forestry, wildlife, and logging professionals partner with home/landscape care professionals to develop targeted professional training to educate this diverse group of potential service providers, as well as utilize existing pesticide recertification programs when possible. The approach must include an assessment of business, marketing, and economics that will help convince professionals that serving this audience improves their existing business model and profits. This will require more assessment of small acreage owners to

see how much, and for what services, they are willing to pay professionals. A followup survey of users of the Woods in Your Backyard manual can help to provide this information and gain more insight that will help answer questions that potential service providers will want to know.

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#### REFERENCES

Allman, P. 1983. The nature and process of adult development. In M. Tigt (Ed.), *Adult learning and education* (pp. 107-123). London: Groom Helm.

Birch, T.W. 1996. *Private forest-land owners of the United States, 1994*. USDA Forest Service, Northeastern Forest Experiment Station Resource Bulletin NE-134. 183 p.

Butler, B. and E. Leatherberry. 2004. America's Family Forest Owners. *Journal of Forestry* 102(7): 4-9.

Esseks, J.D. and R.J. Moulton. 2000. Evaluating the forest stewardship program through a national survey of participants. In I.A.Munn. *Proceedings of the Southern Forest Economics Workshop*, Biloxi, MS. 4-18-1999. University of Georgia, Athens, GA.

Egan, A.F. and A.E. Luloff. 2000. The Exurbanization of America's Forests: Research in Rural Social Science. *Journal of Forestry*. 98(3): 26-30.

Finley, A.O., D.B. Kittredge, T.H. Stevens, C.H. Schweik, and D.C. Dennis. 2006. Interest in Cross-Boundary Cooperation: Identification of Distinct Types of Private Forest Owners. *Forest Science* 52(1): 10-22.

Hull, B.R., D.P. Robertson, G.J. Buhyoff. 2004. Boutique Forestry: New Forest Practices in Urbanizing Landscapes. *Journal of Forestry* 102(1): 14-19.

Hull, B.R., S.F. Ashton, R.N. Visser. 2006. "Who are Interface Landowners?" Fact Sheet 2.1. In: Monroe, M. C.; L. W. McDonell; L. A. Hermansen-Báez (Eds.). 2006. *Changing Roles: Wildland-Urban Interface Professional Development Program*. Gainesville FL: University of Florida.

Kays, J., J. Drohan, A. Downing, J. Finley. 2006. *The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home*. Ithaca, NY: Natural Resource, Agriculture, and Engineering Service.

Kendra, A. and R.B. Hull. 2005. Motivations and Behaviors of New Forest Owners in Virginia. *Forest Science* 51(2): 142-154.

Kittredge, D.B. 2004. Extension/Outreach Implications for America's Family Forest Owners. *Journal of Forestry* 102(7): 15-18.

Knowles, M. 1984. *Androgogy in Action: Applying Modern Principles of Adult Learning*. San Francisco, CA: Jossey-Bass Publishers. 444p.

Metcalf, A., J.C. Finley, A.E. Luloff, R.C. Stedman. (Unpublished Data). Private Forest Landowner Access Study. Penn State University. University Park, PA.

Macie, E.A., L.A. Hermansen, eds. 2002. Human influences on forest ecosystems: the southern wildland-urban interface assessment. Gen. Tech. Rep. SRS-55. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 159 p.

Sampson, N. and L. DeCoster. 2000. Forest Fragmentation: Implications for Sustainable Private Forests. *Journal of Forestry*. 98(3): 4-8.

Vince, S.W., M.L. Duryea, E.A. Macie, L.A. Hermansen, eds. 2005. *Forests at the Wildland-Urban Interface: Conservation and Management*. Boca Raton, FL: CRC Press LLC.

Wear, D.N., J.G. Greis. 2002. Southern Forest resources assessment: summary report. Gen. Tech. Rep. SRS-54. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 103 p.