



Forest Stewardship

Information Exchange

Spring/Summer 2002
Volume 5 Issue 1

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Produced by:



USDA
Forest Service



Northeastern Area
State and Private
Forestry

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Stewardship News

Sprawl and “Smart Growth” Education

Sprawl can be defined as “dispersed development outside compact urban and village centers along highways and in rural countryside” (Vermont Forum on Sprawl, www.vtsprawl.org), whereas **smart growth** is “an approach to economic growth that seeks to create urban areas that are as resource-efficient and sustainable as possible” (Export Council for Energy Efficiency, www.ecee.org). In a recent article in the *Journal of Forestry* (March 2000), Sampson and Decoster



state that foresters generally dislike land-use regulations (and thus, by inference, don't like to get involved in issues such as sprawl), but they indicate that some kind of smart growth is necessary to keep productive forests from becoming unmanageable or disappearing altogether. Smart growth education for natural resource professionals, as well as other major players in growth issues (planners, bankers, realtors, homebuyers), is critical to better understanding sprawl and its effects on forests, and should lead to better growth management in the future.

The Maine Smart Growth Institute (SGI), hosted by the Maine State Planning Office in fall 2001, represents a recent effort towards smart growth education. The curriculum was based on a program previously held in Maryland. The Maine SGI, offered as a one-time event to a small number of regional and municipal planners as well as some natural resource professionals, was an intensive 2-week residential program designed to share the most up-to-date information about smart growth. Participants explored Maine's historic land use patterns, the forces behind sprawl, and the outcomes of continuing current patterns of growth. Problem-solving skills were developed in such areas as fiscal management, tax policy, land use planning, natural resource and rural

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sustainability, urban design, the real estate marketplace, negotiation methods, visual and other communication tools, and transportation policy.

The topic of smart growth is very complex, but here are just a few key points from the workshop:

- ‡ Towns currently experiencing rapid growth or expecting future growth pressures should promptly secure their green infrastructure needs (open space recreation areas, wetlands, actively managed forest lands, agricultural lands) and then apply smart growth methods (creating traditional New England neighborhoods, cluster developments, conservation subdivisions incorporating development and open space goals) to areas designated for residential and commercial development.
- ‡ The typical growth paradigm calling for 2- to 5-acre lots disperses development, resulting in forest fragmentation and parcelization, and increasing community service costs. Additional density opportunities (single-family residential cluster developments, conservation subdivisions, multi-family units) provide homebuyers more options to choose from and help retain open space while controlling community service costs.
- ‡ It is critical to link transportation planning with land use planning, rather than conducting them independently. Road construction often determines where growth will take place whether or not it is planned by local communities.
- ‡ Towns should develop maps of future roads and sewer networks to guide growth, enabling communities to be proactive when developers submit proposals for new construction.
- ‡ Whenever possible, new schools should be located in existing town centers rather than rural areas. Locating regional schools in suburban or rural areas increases transportation costs and provides an incentive for building residential developments nearby. In addition, more funding should be allocated to improving older urban schools rather than building new suburban or rural schools.

For further information on the Maine Smart Growth Institute, contact Beth DellaValle of the Maine State Planning Office, 38 State House Station, 184 State Street, Augusta, ME 04333, phone (207) 287-2851.

For information on sprawl, contact the Vermont Forum on Sprawl, whose mission is to assist Vermont (and other States) in achieving compact settlement surrounded by rural landscape while encouraging community and economic development to be consistent with this vision. The forum polled over 2,300 randomly selected Vermonters on the subject of community values and sprawl. Key findings included the following:

- ‡ A clear majority of respondents (61 percent) felt there is a need to take action to stop sprawl. Only 28 percent felt that no action should be taken.
- ‡ Sprawl is not inevitable, according to the respondents. Of those who thought current land use patterns would lead to sprawl, 81 percent believed sprawl can be stopped.
- ‡ Overall, 72 percent of respondents said that sprawl and growth were not the same. Of those, 90 percent said it is possible to have growth without sprawl.

To obtain more information, contact the Vermont Forum on Sprawl at (802) 864-6310 or visit their Web-site at www.vtsprawl.org.

Women and the Woods

“Women and the Woods,” a collaborative project between the Maine Forest Service and University of New Hampshire Cooperative Extension, is designed to educate women woodlot owners on the business aspects of woodlot ownership. Funded by the USDA Forest Service in 2001, the project is currently in Phase I, including curriculum development, cosponsor development, and instructor

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Changes in Current Use Tax Program Enhance Forest Stewardship in Rhode Island

Like many States, Rhode Island offers a current use tax program, enabling land to be assessed at its current use rather than its potential value as buildable land. In the past though, the State provided little guidance on assessment rates for the different classes of current use land—farm, forest, and open space. As a result, rates varied significantly between communities, while some communities assessed all three classes at the same rate.

Work began on standardizing methodologies for use value assessments in 1999. The new standards now are in place, calling for forest land to be valued at \$100/acre and open space to be valued at a percentage of fair market value (on a sliding scale depending on soil limitations). Many landowners are taking advantage of the new standards by changing their property's designation from open space to forest land; other landowners are looking to enter the program for the first time.

Forest land designation does not come without a cost, although the resulting benefits are immeasurable. Rhode Island requires all landowners under the program to have

a written, up-to-date forest management plan prepared by a professional forester. All plans are reviewed by the State's Forest Stewardship Program. Every 5 years, landowners must undergo a recertification process, which includes a site visit from State personnel to ensure they are implementing their plan's recommendations.

Rhode Island's Forest Stewardship Program welcomes this change in current use tax valuation as an opportunity to spread the "stewardship message" and to place more lands under forest management plans. The site visits enable program staff to interact with landowners in person, while ensuring that proper stewardship is both understood and implemented. For more information, please contact Tom Abbott, Rhode Island Forest Stewardship Program, at (401) 539-2356 or tabbott@dem.state.ri.us.

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training. Phase II, the program delivery phase, will begin in summer 2002.

The modular curriculum, designed to be used whole or in part, includes the following: setting objectives; the stewardship concept; long-term planning; estate planning, including land protection techniques; Federal and State income taxes and property taxes; selling timber; working with professionals; liability issues, laws, and other legal aspects of owning land; and where to go for help. The curriculum is State specific for certain topics.

Instructors will be recruited from the ranks of the Maine and New Hampshire service forestry programs and will include private forestry and other natural resource professionals, with special emphasis placed on recruiting women. The instructor curriculum is geared towards

teaching adults, focusing on women in particular. The curriculum will be packaged so that instructors can use it one-on-one, with small groups, or in formal presentations.

One of the project goals is to develop relationships with groups that are not traditional to forestry. These groups will be asked to serve as program cosponsors and convene meetings in familiar settings.

For more information, contact Kathy Nitschke of the Maine Forest Service at (207) 287-1073 or kathy.nitschke@state.me.us, or Karen Bennett of University of New Hampshire Cooperative Extension at (603) 862-4861 or karen.bennett@unh.edu.

An excellent Web-site for identifying twigs with or without leaves is
www.cnr.vt.edu/dendro/dendrology/syllabus/twigkey/key1.htm

Pilot Study to Analyze Stewardship Tracts

The States of Connecticut, Massachusetts, Maryland, and Missouri received a Forest Service grant as part of a pilot study to enhance the Forest Stewardship Program. The study will assess the accomplishments of the program since its inception in 1990 and will determine areas for future emphasis. Since program funding is limited, it is important to focus stewardship efforts in areas where they will have the greatest return, as well as to provide well-documented accomplishments to support future budget requests.

The study will document the size and location of all forest stewardship areas (areas with approved forest stewardship plans) that have been enrolled in the program to date. This will show the proximity of current stewardship areas to each other, as well as their proximity to other important features. An associated database will track information on each area, such as the stewardship accomplishments (acres of timber stand improvement, acres of wildlife habitat improved, etc.).

The following questions will be explored:

- ‡ Where are existing forest stewardship areas located in relation to other features such as protected public and private lands, nonindustrial private forest lands, and recreation areas, as well as sawmills and other forest-based businesses?
- ‡ Where are the following types of areas located?
 - 🌲 Resource areas (e.g., forested cover types, forest areas of defined patch size, streams, wetlands, riparian areas, ecological regions, areas with certain soil characteristics)
 - 🌲 High risk areas (e.g., areas with high potential or historic occurrence of forest health problems, areas with high potential for wildfire based on high forest fuel loadings, impaired waters, municipal water sources, priority watersheds, areas with steep slopes, areas vulnerable to forest fragmentation and parcelization)
 - 🌲 High opportunity areas (e.g., other public and private initiative areas with compatible management and risk protection goals)
 - 🌲 Areas with threatened and endangered species

- ‡ To what extent do forest stewardship areas overlap with these identified areas?
- ‡ What areas of the State would appear to be suitable for increased stewardship planning emphasis?
- ‡ What level of information and attribute data is needed to effectively answer analytical questions at the regional, State, and local level? What is the feasibility of extending this capability to all 20 States served by the Forest Service's Northeastern Area?

For more information, contact Mark Buccowich of the USDA Forest Service, Northeastern Area at (610) 557-4029 or mbuccowich@fs.fed.us.

Small Woodlot Owner's Handbook

The Small Woodland Owners Association of Maine (SWOAM) recently developed the *Small Woodlot Owner's Handbook* to bring together valuable information for woodlot owners. It familiarizes landowners with major issues associated with small woodlot management, from planning and management to taxation issues and harvesting. Although the handbook was written for Maine landowners, the information presented on planning, management, forest taxation, and how to conduct a forest harvest is useful for woodland owners in any State. For further information, contact SWOAM at P.O. Box 836, Augusta, ME 04332-0836, phone 1-877-467-9626, or visit their Web-site at www.swoam.com.

Correction

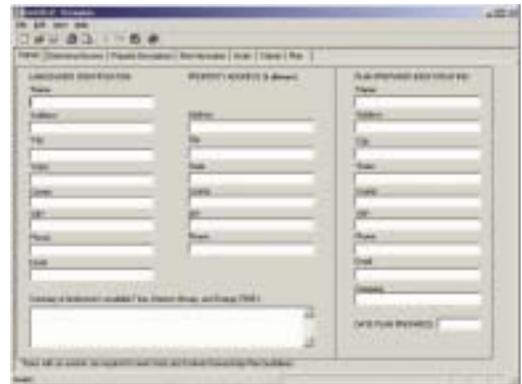
Fred Borman works for the Connecticut Department of Environmental Protection, not the Department of Environmental Management as stated in Volume 4, Issue 2 of the Forest Stewardship Information Exchange.

STEWPLAN—Easy-to-Use Software to Produce Stewardship Plans

The USDA Forest Service’s Northeastern Research Station in Burlington, Vermont, has recently produced a software program called **Stewplan** to assist in the preparation of forest stewardship plans. Stewardship plans are the best way to develop land use goals and select activities for managing forest and biodiversity resources. This Windows-based program is part of the NED family of software that has been developed at the Burlington Lab over the past decade. Target users are natural resource professionals (forestry, wildlife, soils, and other specialty areas) who write stewardship plans and landowners interested in writing their own plans. The program allows users to enter data into a template that includes all the necessary elements required by the Forest Service and the State forestry agencies responsible for administering the Forest Stewardship Program. Additional elements that are not required but are strongly recommended to improve the overall quality of stewardship plans are also included.

The program is organized to resemble a set of file cards with tabs at the top. The first screen allows users to enter information under the “Names” tab. Any information to be entered can be copied from another source and pasted into Stewplan using standard cut, copy, and paste methods. A Help function is available to guide users through the program. From the home screen, users have the option to select from five additional tabs: Property Description, Site Information, Goals, Stands, and Plan.

Stewplan may be downloaded from the Burlington Lab’s Web-site at www.fs.fed.us/ne/burlington/ned. For further information, contact Mark Twery or Peter Knopp at the Burlington Lab (802-951-6771).



The Stewplan program offers a simple, step-by-step approach to developing a stewardship plan.

Crop Tree Field Guide

The USDA Forest Service’s recently published field guide, *Crop Tree Field Guide—Selecting and Managing Crop Trees in the Central Appalachians* (NA-TP-10-01), was developed as an aid for foresters and landowners to applying crop tree management techniques in the central Appalachian region. Those familiar with *Crop Tree Management in Eastern Hardwoods* will find this latest publication to be a source of additional guidance for selecting crop trees to accomplish desired landowner goals such as timber production, improved wildlife habitat, and enhanced aesthetic benefits.

The guide provides information on timber crop trees (unit value, growth rate, quality comments, health issues, and natural regeneration), wildlife crop trees (mast production and cavity formation), and aesthetic crop trees (fall foliage, spring blossoms, and size, shape, or form). It features 16 species commonly selected as crop trees: black cherry, white ash, yellow poplar, northern red oak, black walnut, sugar maple, red maple, American beech, white oak, chestnut oak, scarlet oak, black oak, shagbark hickory, mockernut hickory, pignut hickory, and bitternut hickory.

The publication can be accessed on the Morgantown Field Office Web-site (www.fs.fed.us/na/morgantown/frm/stewardship/stewpubs.htm). Limited copies are available by calling (304) 285-1527.

Ongoing Research at the Durham Lab

Research is underway to assess the activity of forest bats in relation to opening size. This ongoing study in the White Mountain National Forest is being conducted by Mariko Yamasaki, Mike Medeiros, and Chris Costello. Objectives of the study include documenting (1) forest bat foraging and commuting activity associated with patch cuts relative to adjacent forest stands and (2) the relative species occurrence of those bats most likely to be caught using mist netting procedures.

The nine bat species found in the White Mountain National Forest include big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*), eastern red bat (*Lasiurus borealis*), silver-haired bat (*Lasionycteris noctivagans*), eastern pipistrelle (*Pipistrellus subflavus*), little brown bat (*Myotis lucifugus*), northern bat (*Myotis septentrionalis*), eastern small-footed bat (*Myotis leibii*), and Indiana bat (*Myotis sodalis*).

Work to date shows a significantly higher level of forest bat activity in regenerating hardwood stands and softwood

group cuts than in sapling-pole and mature stands of both hardwoods and softwoods. Temporary forest openings of various sizes are being created to meet a variety of wildlife habitat and timber objectives.

Researchers are using ultrasonic detection techniques to survey flight activity in four pairs of newly harvested hardwood patches and adjacent mature hardwood stands, plus two reference plots (a wet field and a small reservoir). The results of this survey add to the baseline description of species distributions and bat community structure associated with managed forests in the northeastern United States.

Preliminary results suggest a relationship between the size of forest openings and bat species morphology.

Cruising Rod Assists in Calculating Tree Volume

The following short article appeared in the monthly newsletter of the Small Woodlot Owners Association of Maine (SWOAM News, November 2001, Volume 26, Number 11). It is reprinted here with SWOAM's permission with some slight modifications.

For years, foresters and landowners have used Biltmore sticks to calculate the approximate diameter and volume of trees on a woodlot. However, one drawback of the traditional Biltmore stick is the need to be 66 feet away from a tree in order to determine its volume. Developed in the early 1980's by E. Parker Johnson, a dedicated SWOAM member who has since passed away, the SWOAM cruising rod allows an individual to estimate the volume of a standing tree from more flexible and convenient distances. Rather than requiring 66 feet, which may put you at a location where a tree is no longer in sight, the SWOAM cruising rod can estimate volume from any location from which the tree is visible.

The procedure for using the rod is actually quite easy. The first step is to measure the diameter of the tree. Using the cruising rod, stand one arm's length from the tree (25 inches) and estimate the approximate diameter of the tree. Once the diameter is determined, walk to a convenient location from which to see the tree. Hold the cruising rod upright (with the measurements of the appropriate diameter visible) at a distance from your eye in which the tree and the cruising rod appear to have the same diameter. At this point, the cruising rod will identify the approximate location of each 8-foot log on the tree and the total board footage.

For additional information, contact SWOAM at 1-877-467-9626 or info@swoam.com.

Biodiversity

Managing Habitat for Scarlet Tanagers

A study by the Cornell Lab of Ornithology provides some valuable information on managing habitat for scarlet tanagers and other forest-interior birds that rely on mature forests. The scarlet tanager is adversely affected by fragmentation in portions of its range. Providing habitat for the scarlet tanager would also benefit other forest-interior species.

The study provides management guidelines for four specific regions: Midwest, Appalachian, Atlantic Coastal Plain, and Northern Forest. The two regions that comprise most of the New England/New York area include the Atlantic Coastal Plain (southern New England and coastal portions of New York, New Hampshire, and Maine) and the Northern Forest (northern New England and northern New York).

The guidelines are based on the amount of existing mature forested habitat within 2,500-acre blocks. Minimum-area tables show the relationship between the estimated amount of forested habitat in the 2,500-acre blocks and the minimum habitat area required to provide high, moderate, and low suitability for breeding tanagers. Habitats with high suitability have the same probability of supporting breeding tanagers as an unfragmented forest. Habitats with moderate suitability are 25 percent less likely to support these tanagers, and habitats with low suitability are 50 percent less likely. An example of a table for the Northern Forest region is shown.

Percentage of forest in 2,500-acre block	Minimum area (acres) required for habitat suitability		
	High	Moderate	Low
70	41	21	9
60	54	28	12
50	70	36	15
40	90	46	20
30	118	61	26
20	158	82	35
10	228	117	51

Source: Rosenberg and others 1999

To use this table, estimate the percentage of mature forest in 2,500-acre blocks and then follow across the row to determine the minimum forested acreage to provide high, moderate, and low suitability. For example, if 70 percent of the block is mature forest, the minimum size of a specific forested area that would be necessary to provide highly suitable habitat is 41 acres; for moderately suitable habitat, 21 acres; and for low suitable habitat, 9 acres. As the percentage of mature forest decreases within the 2,500-acre block, the minimum acreages increase for all categories.

Reference

Rosenberg, K.V.; Rohrbaugh, R.W., Jr.; Barker, S.E.; Lowe, J.D.; Hames, R.S.; Dhondt, A.A. 1999. A land manager's guide to improving habitat for scarlet tanagers and other forest-interior birds. [Ithaca, NY]: The Cornell Lab of Ornithology. 23 p. [www.birds.cornell.edu/conservation/tanager/tanager.pdf].

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Naturalist's Corner

Hairy Cap Mosses

The hairy cap mosses (*Polytrichum* spp.) are common species on northeastern woodlots. They are named for the cap (or calyptra) that covers most of the head (or capsule) in early spring. Adults and children alike enjoy pulling these caps off as they walk forest trails. (My youngest son, Andy, enjoys these mosses as well because of his interest in mythological forest gnomes. The hairy cap reminds him of a hat that a gnome might wear.—*RM*) These mosses later lose their caps, exposing the small, angled capsule. Within the capsules are tiny spores that eventually fall to the ground and propagate.

According to Janice Glime in her 1993 book *The Elfin World of Mosses and Liverworts of Michigan's Upper Peninsula and Isle Royale* (Isle Royale Natural History Association, 148 p.), the genus is common worldwide and is one of the best known moss genera. In Europe, hairy cap mosses have been used to make brooms and for weaving into baskets. In China, they are made into a tea to treat colds and the oils are used to treat women's hair.



Polytrichum juniperinum (photo by Ken Dudzik)
