

# Existing and Potential Incentives for Practicing Sustainable Forestry on Non-industrial Private Forest Lands

John L. Greene,<sup>3</sup> Michael A. Kilgore,<sup>4</sup> Michael G. Jacobson,<sup>5</sup>  
Steven E. Daniels,<sup>6</sup> and Thomas J. Straka<sup>7</sup>

## Abstract

This study examined the compatibility between sustainable forestry practices and the framework of public and private financial incentive programs directed toward nonindustrial private forest (NIPF) owners. The incentives include tax, cost-share, and other types of programs. The study consisted of four components: a literature review, a mail survey of selected management assistance foresters in all 50 states, focus groups of NIPF owners in each national region, and a comparative analysis of findings from the first three components. The literature review identified three approaches that consistently lead NIPF owners to apply sustainable forest management practices on their land: technical assistance, cost-shares, and programs that put owners in direct contact with a forester or other natural resource professional. The management assistance foresters regarded the Forest Land Enhancement Program as the workhorse federal financial incentive program, with the Forest Stewardship, Forest Legacy and Conservation Reserve Programs also receiving high ratings. The forest owner focus groups expressly held several concepts in common, including a commitment to long-term stewardship and a preference for technical assistance over other types of incentives. The study findings yielded three main conclusions and nine recommendations to better adapt financial incentive programs to widely-held NIPF owner goals and objectives.

**Key Words:** Cost-share, tax incentives, technical assistance, focus groups.

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<sup>3</sup> Research Forester, USDA Forest Service, Southern Research Station, 701 Loyola Ave., Room T-10034, New Orleans, LA 70113-1931. Phone: (504) 589-7130; e-mail: [jgreene01@fs.fed.us](mailto:jgreene01@fs.fed.us) .

<sup>4</sup> Assistant Professor, University of Minnesota, Department of Forest Resources, 301k Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-6122. Phone: (612) 624-6298; e-mail: [mkilgore@umn.edu](mailto:mkilgore@umn.edu) .

<sup>5</sup> Associate Professor, The Pennsylvania State University, School of Forest Resources, 309 Forest Resources Building, University Park, PA 16802-3604. Phone: (814) 865-3994; e-mail: [mj2@psu.edu](mailto:mj2@psu.edu) .

<sup>6</sup> Professor, Utah State University, College of Natural Resources, 5200 Old Main Hill, Logan UT 84322-5200. Phone: (435) 797-1255; e-mail: [sdaniels@ext.usu.edu](mailto:sdaniels@ext.usu.edu) .

<sup>7</sup> Professor, Clemson University, Department of Forestry and Natural Resources, P.O. Box 340317, Clemson, SC 29634-0317. Phone: (864) 656-4827; e-mail: [tstraka@clemson.edu](mailto:tstraka@clemson.edu) .

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## **Introduction**

We are reporting, in broad terms, on a study that examined the compatibility between sustainable forestry practices and the framework of public and private financial incentive programs directed toward nonindustrial private forest owners. The core hypothesis was that there may be a structural disconnect between the kinds of practices these programs encourage and practices associated with sustainable forestry.

The structure of financial incentive programs for forest owners dates to the 1940s and 50s, and was generally motivated by concern over timber scarcity and recognition that better-managed private forests could provide a larger share of the nation's timber supply. Thus, the programs were designed to help forest owners become more active timber managers. It would not be surprising if the incentive programs either ignored sustainable forestry practices or were in conflict with them; certainly the fact that sustainable forest management arose a full half-century after the prototype financial incentive programs makes it unrealistic to expect the incentive programs to have anticipated the concept of sustainability. Perhaps more important, however, is the potential philosophical difference behind the two institutions – are financial incentive programs focusing on timber production and revenues while sustainable forestry includes other objectives as well? And if there is a disconnect between financial incentive programs and sustainable forestry, where does this leave forest owners?

The research design and results attempt to get at these questions by triangulating different kinds of data. First, our goal is to tell a national story, but to understand regional variations as well. That argues for a replicated regional research approach that can be aggregated into a national picture. We want to understand how the people who deliver these programs feel about their effectiveness, but also to contrast that with the views of the nonindustrial private forest owners the programs are intended to reach. Furthermore, we want to be able to blend the kinds of rigorous quantitative results that emerge from survey data with the nuanced understanding that emerges from qualitative research.

## **Study Objectives and Approach**

The purpose of this study was to identify existing and potential incentives for practicing sustainable forestry on nonindustrial private forest lands in the United States. This overall purpose was broken into four distinct objectives:

- To identify tax, cost-share, and other types of financial incentive programs with the potential to enhance the practice of sustainable forestry on nonindustrial private lands;
- To evaluate the relative effectiveness of different types of programs and of different methods of administering similar programs;
- To provide insight into whether and how the programs interact; and
- To disseminate the study findings to forestry practitioners and policy-makers.

The scope of the study was all financial incentive programs offered by federal and state agencies, private entities, and nongovernmental organizations. It included program ideas that have only been proposed or implemented on a limited scale as well as established programs.

The definition of sustainable forestry used for the study coincides with that given in the *National Report on Sustainable Forests – 2003* (USDA Forest Service 2004), which specifically includes the concept of biodiversity.

In order to address the first three study objectives, the study was conducted in four parts

- A thorough review of over six decades of literature on the tax, cost-share, and other financial incentives currently available to nonindustrial private forest owners. Priority was given to recent research, but foundational studies also were identified and summarized. Studies included in the review were analyzed for their conclusions regarding the effectiveness of the various types of incentive programs and their apparent impact on forest owner motivations and practices.
- A survey of selected management assistance foresters in state forestry organizations nationwide. The identified foresters were asked to name and describe the public and private forest incentive programs available in their state, plus any private programs in neighboring states they were aware of. They also were asked to assess forest owners' awareness of each program, its overall appeal among the owners aware of it, its effectiveness in encouraging sustainable forestry and in enabling owners to meet their objectives of forest ownership, and to suggest ways that owner participation and administrative efficiency might be improved.
- Focus groups of nonindustrial private forest owners in each national region. The owners were asked to discuss the types of incentive programs they prefer, what forest ownership objectives the programs help them to meet, what use of the programs enables them to accomplish, what additional program approaches would appeal to other ownership objectives they have for their holdings, and what sustainable forestry means to them.
- A comparative analysis. The findings from the first three phases of the study were compiled and summarized, and conclusions and recommendations developed.

The study fourth objective is being addressed through a project website, and through presentations and publications directed to nonindustrial private forest owners, public and private foresters, forest researchers, nongovernmental organizations, and policymakers.

### **Findings from the Review of Literature**

From the time forest owners in the United States were first becoming interested in long-term management, researchers have been suggesting ways to improve the management and sustainability of nonindustrial private forest holdings: technical assistance, perhaps leveraged through coordinated management of forest ownerships (Stoddard 1942, Cloud 1966); financial incentives to owners who demonstrate an interest in managing their forest (Folweiler and Vaux 1944); reduced property, estate and inheritance taxes, more favorable tax credits and deductions, more favorable capital gains treatment of timber income, and more cost-sharing of forest management expenses (Fecso et al. 1982); incentive programs for non-market forest products, such as wildlife and recreation (Greene and Blatner 1986); assistance to manage forests to maintain and improve standing timber values (Blatner and Greene 1989); incentives linked to specific stewardship practices (Greene 1998); and

extension of tax incentives for the production of marketable forest products to environmental goods and services (Koontz and Hoover 2001).

Subsequent research has shown that nonindustrial private forest owners favor some incentive approaches over others: Only a small percentage of owners would consent to coordinated management of their land (Klosowski et al. 2001). Large fractions of owners are unaware that financial and tax incentive programs exist or don't know what the programs can do for them (Yoho and James 1958, Sutherland and Tubbs 1959, Perry and Guttenberg 1959, Anderson 1960, Hutchison and McCauley 1961, McClay 1961, Quinney 1962, Schallau 1962, 1964, Farrell 1964, Christensen and Grafton 1966, Stoltenberg and Gottsacker 1967, Koss and Scott 1978, Greene et al. 2004). Many owners who participate in an incentive would have done the supported practice anyway (James et al. 1951, Brockett and Gerhard 1999, Baughman 2002), although the incentive enables the owners to treat additional acres (Royer 1987, Bliss and Martin 1990). Favorable property tax and capital gains provisions have little effect on forest owner behavior (Stoddard 1961, Ellefson et al. 1995, Brockett and Gerhard 1999); and forest property tax programs are only modestly successful in accomplishing their objectives (Hibbard et al. 2003).

Three approaches, however, have consistently been found to lead nonindustrial private forest owners to apply sustainable forest management practices on their land: technical assistance, cost-shares, and programs – such as the Forest Stewardship Program – that put owners in direct contact with a forester or other natural resource professional. In a foundational study of forest owners in Mississippi, James et al. (1951) found that owners prefer technical assistance over financial or tax incentives. In their recent study of policy tools to encourage application of sustainable timber harvesting practices in the United States and Canada, Kilgore and Blinn (2004) also found technical assistance is the most effective way to encourage owners to apply sustainable practices, followed by cost-share programs.

In their study of the Forest Stewardship Program (FSP) Esseks and Moulton (2000) found that getting the required forest management plan provides two-thirds of participating forest owners their first contact with a professional forester. A like fraction begin managing their land for multiple purposes and using practices that are new to them. Their participation in FSP prompted the owners to spend an average of \$2,767 of their own funds for forest management activities, something nearly two-thirds said they would not have done if they had not received the cost-share (Esseks and Moulton 2000). Both Greene and Blatner (1986) and Baughman (2002) found that direct contact with a forester or other natural resource professional is associated with owners being forest managers. And Egan et al. (2001) cited the aspects of FSP that involve contact with a professional – getting a management plan and technical assistance – as the main things owners like about the program.

Among the key findings from the literature review process are that most financial incentive program approaches have little effect on forest owner behavior. However, three approaches – technical assistance, cost-shares, and programs that put owners in direct contact with a forester or other natural resource professional – consistently lead nonindustrial private forest owners to apply sustainable forest management practices on their lands. Forest owner acceptance of innovations in tax and other financial incentives has been shown to follow traditional diffusion channels, beginning with local leaders (Doolittle and Straka 1987). Finally, from a policy standpoint, linkages are crucial. Incentives will be most effective in

changing forest owner behavior if they are specifically linked to stewardship practices rather than being available regardless of management behavior.

## **Findings from the Management Forester Survey**

### ***Federal Financial Incentive Programs***

The survey of state management assistance foresters was conducted using the Dillman (1999) Tailored Design Method. The selected forester in each state was asked to describe and rate nine federal financial incentive programs: the Forest Stewardship Program (FSP), Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), Forest Land Enhancement Program (FLEP), Forest Legacy Program (FLP), Landowner Incentive Program (LIP), Southern Pine Beetle Prevention and Restoration (SPBPR), Wetlands Reserve Program (WRP), and Wildlife Habitat Incentives Program (WHIP).

Only FSP and FLEP were available in all 50 states. EQIP was available in 47 states; FLP in 45 states; WRP and WHIP in 40 states; CRP in 39 states; LIP in 31 states; and SPBPR in 9 southern states (see Table 1).

The characteristics the foresters rated include forest owner awareness of each incentive program, its overall appeal among owners aware of it, its success in encouraging sustainable forest management and enabling owners to meet their objectives of forest ownership, and percentage of program practices remaining in place and enrolled acres remaining in forest over time. The next several paragraphs highlight results of the ratings, on a program-by-program basis.

FSP was among the highest-rated programs overall regarding forest owner awareness, appeal among owners aware of it, encouraging sustainable forest management, enabling owners to meet their objectives of forest ownership, and percentage of enrolled acres remaining in forest over time. Comparing results across the four regions, foresters in the Midwest indicated that a lower percentage of program practices remained in place over time than those in the other regions.

CRP rated third overall in terms of owner awareness. On a regional basis, forester perceptions of the program's appeal among owners aware of it and its success in encouraging sustainable forest management were highest in the South and lowest in the West.

Among the four regions, foresters in the East rated EQIP lowest in terms of appeal among owners aware of the program, encouraging sustainable forest management, and enabling owners to meet their objectives of ownership. Foresters in the Midwest rated the program lowest with respect to program practices remaining in place and enrolled acres remaining in forest over time.

FLEP seemed to be regarded as the “workhorse” of federal incentive programs, and rated perhaps highest overall of the nine programs. The foresters placed it among the top-rated programs for owner awareness, appeal among owners aware of it, encouraging sustainable forest management, enabling owners to meet their objectives of ownership, and enrolled acres remaining in forest over time. There was little regional variation in the scores assigned to FLEP, except that foresters in the East rated it somewhat lower than those in other regions for helping owners meet their objectives.

FLP was among the programs rated highest overall for encouraging sustainable forest management and enabling owners to meet their objectives of ownership. Management assistance foresters in all four regions gave FLP high marks for program practices remaining in place and enrolled acres remaining in forest over time.

LIP and WRP ranked lowest of the nine programs for owner awareness, although the ratings assigned to them still were good overall. Comparing the results across regions, foresters in the Midwest considered LIP ineffective in nearly all measures surveyed, while foresters in the East considered the program quite effective. Ratings for WRP also were mixed. Foresters in all regions except the South gave the program low ratings for encouraging sustainable forest management, while foresters in all regions except the Midwest rated the program high for enrolled acres remaining in forest over time.

SPBPRP was among the top-rated programs for enabling owners to meet their objectives of ownership. WHIP was among the lowest-ranked programs in terms of owner awareness and appeal to owners aware of it.

Most of the foresters' suggestions for improving owner participation in the programs centered on increased funding and staffing levels, single-agency delivery, and making program rules more consistent over time. Most of their suggestions for improving administrative efficiency centered on improving program application and delivery processes, and simplifying paperwork and reporting requirements.

### ***State and Other Financial Incentive Programs***

The management assistance foresters also were asked to name, describe, and rate financial incentive programs offered to nonindustrial private forest owners by their state and by private entities, such as forest industry firms, forest owner associations, or nongovernmental organizations. All 50 states have some type of preferential property tax to protect forest land from being fragmented or converted to other uses. Each state takes its own unique approach, but the foresters rated the programs above average, overall, for forest owner awareness of them and their appeal among owners aware of them. They rated the programs only somewhat successful, however, in encouraging sustainable forest management and enabling owners to meet their objectives of ownership. Few of the foresters suggested improvements to their state property tax. Improvements that were suggested centered on program administration and objectives, guidelines, eligibility requirements, and valuation methods.

Several states have their own forest cost-share programs, many of which are funded by forest tax revenues. Some of the programs help fund timber management, while others focus on wildlife, riparian areas, or conservation easements; one is a state-level forest stewardship program. The foresters rated these programs above average overall for encouraging sustainable forest management and enabling owners to meet their objectives of forest ownership. The most frequently mentioned suggestions for improving the programs include increased funding, and simplified eligibility requirements, administrative procedures and contracts.

Forest industry programs account for the majority of financial incentives offered by private entities, although programs by land trusts or conservation organizations also are common. The management assistance foresters rated these programs somewhat lower than federal or

state incentive programs in terms of forest owner awareness of them and their appeal among owners aware of them. This may be because of the targeted nature of the programs, which are not of interest to many forest owners. The foresters gave privately-sponsored programs high ratings, however, for program practices remaining in place and enrolled acres remaining in forest over time.

### **Findings from the Forest Owner Focus Groups**

Focus groups of nonindustrial private forest owners were conducted in the East, Midwest, South, and West regions following protocols described in *Working Through Environmental Conflict: The Collaborative Learning Approach* (Daniels and Walker 2001). In each region separate focus groups were held for members and non-members of forest owner organizations, resulting in a total of eight groups. Through open-ended questions and verbal prompts, the owners were asked to discuss their experience with financial incentive programs, what forest ownership objectives the programs help them to meet, and what additional program approaches would appeal to other objectives they hold for their land.

Even within focus groups the participants varied widely in terms of size of their forest holding, how long they or their family had held the land, what use they made of the land, and their knowledge and use of past and current incentive programs. A substantial majority of non-forest owner organization members, and in some regions as many as half of members, did not have a written forest management plan.

Despite the differences, all eight groups expressly held several concepts in common. These included a high degree of attachment to their land; a commitment to long-term stewardship and appropriate management; a desire to “do right” by their land; a clear preference for technical assistance – having an extension or service forester “walk the land” with them and explain their options – over cost-share or tax incentives; a commitment to practicing sustainable forestry, although they tended to describe the concept more in terms of sustained yield; and except in the South, a sense that forest ownership is more closely tied to self-identity and lifestyle than to financial return.

The most widely used financial incentive programs were preferential property tax assessment and capital gains treatment of harvest returns. Knowledge of other incentive programs was substantially lower. Virtually every program had been used by someone, but few had been used by many.

The owners leveled a number of criticisms at existing financial incentive programs: that they are inconsistently administered and implemented (both between programs and over time), too slow and bureaucratic, and inadequately funded; that it takes too long for a service forester to visit; and that some owners receive cost-shares despite not fully completing the required activities. These sentiments were shared across the regions, and seemed in some cases to be linked to a broad anti-government sentiment.

Sustainable forestry resonates with owners at a conceptual level, but the specific tactics being used to promote sustainability do not have much traction. In particular, certification has not made significant inroads among owners. Except for those who have been certified through their participation in the Tree Farm program, virtually no owners had pursued certification or expressed much knowledge about or interest in it. In every region there were statements that

certification is an attempt by others (environmentalists were cited in the South and timber companies in the West) to control the management of private forest land.

If sustainable forestry is to make inroads among nonindustrial private forest owners, it will be necessary to frame the concept in terms of the values that motivate their land ownership. Owners are not swayed by arguments that “certified timber gets an *x*-percent market premium” because rate of return is not a primary focus of their ownership. Rather it will be necessary to explain to them – through foresters or other natural resource professionals – how to pursue it on the ground, through forest management practices.

## **Conclusions and Recommendations**

The review of literature, survey of state management assistance foresters, and focus groups of nonindustrial private forest owners yielded three main conclusions:

- Federal and state financial incentive programs currently play a limited role in promoting sustainable forestry practices on the nation’s nonindustrial private forests. There is no structural disconnect between the incentive programs and the practice of sustainable forestry; forest owners sincerely desire to practice sustainable forestry and the incentive programs promote application of sustainable forestry practices. The programs, however, play only a minor role in the owners’ decisions regarding management and use of their forest land.
- There were considerable differences between the regions with respect to some study findings. Findings that differed from region to region include forest owner objectives and interests, consistency between the owner objectives and the available financial incentive programs, how the programs are administered, and how owners perceive the programs’ effectiveness and appeal.
- With respect to other findings, however, there was a consistent message across all four national regions. Three findings were key. First, the highest program priority among forest owners is one-on-one access to a forester or other natural resource professional to walk their land with them and discuss their management alternatives. Second, there is a need for some flexibility in financial incentive programs to address regional differences in forest characteristics and owner objectives. And third, the most effective way to increase the impact of financial incentives would be to ensure adequate funding and stable program requirements over time.

While the study did not find any structural disconnect between existing financial incentive programs and the practice of sustainable forestry, opportunities exist to adapt the programs so they address more fully goals and objectives that are widely held among nonindustrial private forest owners across the nation. The study findings and conclusions generated nine such recommendations:

- Increase funding and availability of one-on-one technical assistance from both extension foresters and state service foresters.
- Use technical assistance rather than certification to convey sustainability ideas; approach sustainability through owners’ long-term stewardship and family legacy objectives.



- Make a written forest management plan a requirement for all incentive programs.
- Design incentive programs to put forest owners in direct contact with a forester or other natural resource professional.
- Design some incentive programs to address regional differences in forest characteristics and forest owner objectives.
- Link incentives directly to stewardship practices instead of general forest management practices.
- Fund cost-share applications according to their expected environmental benefit instead of first-come-first-served.
- Make the requirements for owners to participate in incentive programs more uniform and deliver the programs from a single source in each state.
- Maintain adequate funding and stable program requirements for financial incentives over the long term.

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Table 1. Availability of federal financial incentive programs in the United States, by region and state.

	Forest Stewardship Program FSP	Conservation Reserve Program CRP	Environmental Quality Incentives Program EQIP	Forest Land Enhancement Program FLEP	Forest Legacy Program FLP	Landowner Incentives Program LIP	Southern Pine Beetle Prevention & Restoration SPBPR	Wetlands Reserve Program WRP	Wildlife Habitat Incentives Program WHIP
a. East									
Connecticut	X		X	X	X	X		X	X
Delaware	X	X	X	X	X	X		X	
Maine	X	X	X	X	X	X		X	X
Maryland	X	X	X	X	X	X		X	
Massachusetts	X		X	X	X	X		X	X
N. Hampshire	X		X	X	X	X		X	X
New Jersey	X	X	X	X	X	X		X	X
New York	X	X	X	X	X			X	X
Pennsylvania	X	X	X	X	X	X		X	X
Rhode Island	X		X	X	X			X	X
Vermont	X	X	X	X	X			X	X
b. Midwest									
Illinois	X	X	X	X	X	X		X	X
Indiana	X	X	X	X	X			X	X
Iowa	X	X	X	X	X	X		X	X
Kansas	X	X	X	X		X		X	X
Michigan	X	X	X	X	X	X		X	X
Minnesota	X	X	X	X	X	X		X	X
Missouri	X	X	X	X	X	X		X	X
Nebraska	X	X	X	X	X	X		X	X
N. Dakota	X	X	X	X		X		X	X
Ohio	X	X	X	X	X	X		X	X
S. Dakota	X	X	X	X				X	X
West Virginia	X	X		X	X	X		X	X
Wisconsin	X	X	X	X	X	X		X	X

(Continued, next page)

Table 1. Availability of federal financial incentive programs in the United States, by region and state (continued).

	Forest Stewardship Program FSP	Conservation Reserve Program CRP	Environmental Quality Incentives Program EQIP	Forest Land Enhancement Program FLEP	Forest Legacy Program FLP	Landowner Incentives Program LIP	Southern Pine Beetle Prevention & Restoration SPBPR	Wetlands Reserve Program WRP	Wildlife Habitat Incentives Program WHIP
c. South									
Alabama	X	X	X	X	X			X	X
Arkansas	X	X	X	X	X	X	X	X	X
Florida	X	X	X	X	X	X	X		X
Georgia	X	X	X	X	X	X	X	X	X
Kentucky	X	X	X	X	X			X	X
Louisiana	X	X	X	X	X	X	X	X	X
Mississippi	X	X	X	X	X	X	X	X	X
N. Carolina	X	X	X	X	X	X	X	X	X
Oklahoma	X	X	X	X			X	X	X
S. Carolina	X	X	X	X	X			X	X
Tennessee	X	X	X	X	X		X	X	X
Texas	X	X	X	X	X	X	X	X	X
Virginia	X	X	X	X	X	X		X	X
d. West									
Alaska	X		X	X	X				
Arizona	X			X	X				
California	X		X	X	X				
Colorado	X	X	X	X	X			X	
Hawaii	X			X	X	X			
Idaho	X	X	X	X	X				
Montana	X	X	X	X	X				
Nevada	X		X	X	X	X			X
New Mexico	X		X	X	X				X
Oregon	X	X	X	X	X	X		X	X
Utah	X		X	X	X				
Washington	X	X	X	X	X	X		X	X
Wyoming	X	X	X	X				X	X
Total	50	39	47	50	45	31	9	40	40