

Highlights of the National Evaluation of the Forest Stewardship Planning Program ¹

by

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Abstract

In 1998 and 1999, a nationwide random sample of 1238 nonindustrial private (NIPF) landowners with approved multiple resource Forest Stewardship Plans were interviewed to determine if this program is meeting its Congressional mandate of promoting sustainable management of forest resources on NIPF ownerships. It was found that two-thirds of program participants had never before received professional assistance in managing their lands; a large majority had begun to implement their plans; over one-half were undertaking practices that were new to them; and a majority of owners had adopted and were implementing multi-purpose practices. Over 90 percent of the participants found their plans easy or very easy to understand, and 94 percent said they would recommend FSP to other landowners. Forest plans alone fostered improvements in stewardship behavior, but regression analysis showed that owners were significantly more likely to implement new stewardship practices, to increase personal non-reimbursed dollar expenditures, and to manage for multiple resource outputs when they also received follow up planning assistance and cost sharing for practice installation. Recent (post-study) reductions in federal funding for cost share assistance to implement stewardship practices may have a major adverse impact on this program.

Introduction

The Forest Stewardship Program (FSP) was created by Forestry Title of the 1990 Farm Bill, which amended the Cooperative Forestry Assistance Act of 1978. FSP is targeted at nonindustrial private forest (NIPF) landowners and features whole forest property, multiple resource plans prepared by, or under the direction of, natural resource professionals. Concurrently with FSP, Congress created the Stewardship Incentive Program (SIP) to provide additional technical assistance and cost share incentive payments to implement practices identified through FSP.

The central notion underlying FSP is that if NIPF owners are made aware of opportunities and problems relating to their forest lands, they are likely to undertake practical remedies and other actions recommended by resource professionals. If this is the outcome, then Congress will have achieved its stated goal of promoting long-term sustainable management on these ownerships to meet future public needs for forest products and environmental benefits.

By September 1997, when this study was initiated,

130,000 individual Forest Stewardship Plans encompassing 16.5 million acres had been completed. (Currently, as of April 30, 2000, there are about 167,000 plans covering 20 million acres.) These numbers--plans completed and acres included--were the only output-related nationwide information then available for the FSP, although generally favorable results for had been reported for the program in South Carolina (Melfi et al. 1996) and in the South Puget Sound Region of Washington State (Theoe and Bergstrom 1996).

The fundamental question, and the objective of this study, was to determine if FSP has really changed forest management behavior of NIPF owners in ways that will promote the long term sustainable management of their ownerships. One possible alternative was that private owners may have participated in FSP simply to obtain an approved plan, since it was a requirement in order to be eligible for SIP cost share assistance.

Study Design

Regions. The study was designed to produce statistically reliable results for the U.S. and four

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regions: the *North* (20 states administered by the Forest Service’s Northeastern Area–NA); the *South* (13 states comprising Region 8), the *Great Plains and Rocky Mountains* (12 states) and the *Pacific States* (5 states). Observations were made in all states except Hawaii (which had few plans), Idaho (by statute the state cannot provide landowner names and addresses), Michigan and North Dakota (names and addresses not provided).

Telephone interviews. This was the primary means (84 percent of successful completions) of gathering information from FSP participants. The interviews were conducted by the Public Opinion Laboratory at Northern Illinois University, and averaged 16 minutes per interview, during which responses from up to 99 questions were obtained and entered into a computer data base. The remaining 16 percent of respondents—mostly those with unlisted phone numbers--were surveyed using mailed questionnaires.

Response rate. The target was to obtain 300 usable returns from each of the four regions for a total of 1200. Actual returns totaled 1,238 for an overall response rate of 72 percent.

Findings

Most Participants had never previously received professional assistance in managing their forest lands. Nationally, two-thirds of program participants with active plans said that they had never received professional assistance in managing their forest lands prior to FSP (new clients in figure 1) as compared with one-third who had previously received such assistance. This seems to us to be a good balance between new clients, who logically have the greatest need for forestry assistance, while still recognizing established clients.

In this regard, it is important to note that the FSP was modeled in large part after the State of *Alabama’s Treasure Forest Program*, which formally recognizes owners who practice good forestry and stewardship of the land. So, too, does FSP provide for recognition of participants, including Stewardship Forest signs to designated enrolled lands, although this practice varies by state.

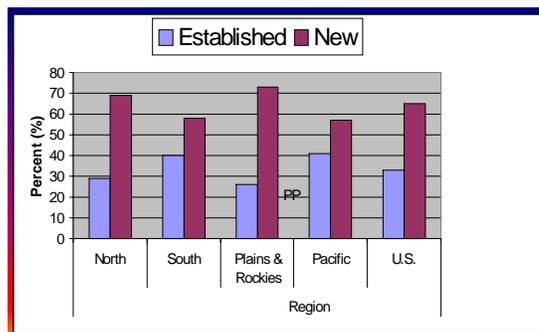
The Plains and Rocky Mountain States had the highest proportion of previously unassisted owners (73 percent), which likely is a result of the infusion of new

FSP and SIP funds into the regions and a major effort to encourage participants to engage in Agro-forestry. The North also has a strong outreach program aimed at new owners and has likewise expanded its private landowner programs due to Stewardship Program funding.

In contrast, the Pacific States and the South both have enrolled comparatively fewer new owners (about 60% new and 40% prior clients in both regions). This may simply be a function of the greater difficulty in locating new clients in these regions.

The South and Pacific States are the Nation’s leading timber supply regions, and both have a large forest

Figure 1. FSP Clientele by Region



industry presence and active industry-sponsored

landowner assistance programs, as well as large numbers of consulting foresters to work with private owners. Moreover, the State Forestry agencies in these states typically are strong and pro-active. Further, the Pacific states included in the study (AK, CA, OR, and WA) all have modern forest practices acts, which bring owners in contact with the State forestry agencies for approval of timber harvesting plans (Ellefson et al.1995). The South has contacted many private owners through federal forestry programs, e.g., about 90 percent of tree planting under both the *Conservation Reserve Program (CRP)* and the *Forestry Incentives Program (FIP)* have been done in the South (Moulton 1994). Moreover, Mehmood and Zhang (2000) have reported that 10 of the states in these two regions (Pacific and South) have state-funded forestry cost share programs.

Most participants have begun to implement their

Stewardship Plans. When asked about their progress in implementing their plans, 92 percent of participants classified themselves as *active*. This included 84 percent who had actually begun to implement one or more of the activities recommended in their plans, and 8 percent who had not yet begun but planned to do so. The remaining 8 percent were *inactive/dropouts*; they had not begun to implement any practices nor did they have plans to do so (table 1).

Table 1. National Progress in Implementing Plans (% of Surveyed Owners)	
Active (92%)	
Have begun to implement	84%
Plan to implement	8%
Inactive/Dropouts	<u>8%</u>
Total	100%

We asked the 8 percent who were *active* but had yet to do anything “Why not?” The most common reasons were lack of time/too busy (24%); it was not yet time to carry out a scheduled activity, e.g., trees too young to thin (15%); lack of funds from SIP or other programs to augment personal funds (14%).

The results were generally similar across the regions: 81 percent of the respondents had begun to implement at least one practice in the South and Pacific States, 83 percent in the Rocky Mountains, while the North had a higher rate of 86 percent; and those planning to implement ranged from 6 to 8 percent across all regions. However, the North posted a dropout rate of only 6 percent as compared with 10 to 11 percent in the other regions, and this difference is statistically significantly.³

Many participants are engaging in forest resource management practices they had not done before. This includes a majority of the owners who previously had received professional assistance in managing their forests. Sixty percent of survey participants with active plans reported they were

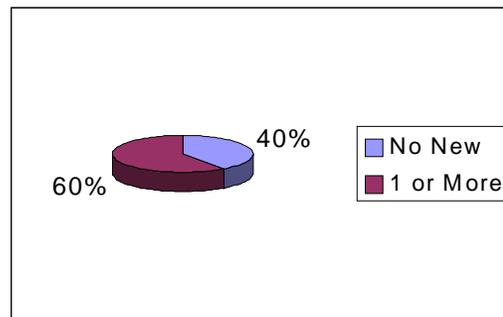
³ At the 0.025 level between the North and both the Pacific States and the Plains and Rocky Mountain States, and at 0.05 for the North, as compared with the South.

engaging in new practices (things they had never done before) as a result of FSP (figure 2), while the remaining 40 percent reported they were not doing new things.

This distribution of surveyed owners is quite similar to the to the distribution of owners who previously had not received professional resource management assistance (65 percent), as contrasted with the 33 percent who reported receiving such assistance (figure 1), and one might presume that the previously unassisted owners would make up the greatest share of owners who are doing something that they had not done before, while, conversely, that previously assisted owners would cluster in the group who were not implementing practices that were new to them.

What we actually found was that owners in both

Figure 2. Owners with active plans who had carried out at least one activity that they had not done prior to FSP



groups were engaging in new practices at similar rates, i.e., 61 percent of the owners who previously had not been assisted were doing new things, while 58 percent owners who had been assisted were trying new things.

We did not inquire as to the nature of previous assistance, but it is common for owners to seek professional assistance for specific activities, such as for preparing and conducting a timber sale from a consulting foresters or on tree planting from a state service forester. Hence, both previously assisted and unassisted owners could find new things to implement in the whole forest property, multi-resource context of FSP.

Within the four regions from 58 percent to 62 percent of owners were trying activities that they had not done

before, and there were no statistically significant differences (at the 0.10 level or high) between the proportions of new and prior clients who were doing new things.

Numerous participants offered comments during the interviews on things they had learned as a result of FSP. For example, a number said that they had heard about, and were concerned about, a certain forest tree disease or insect pest (e.g., Douglas-fir beetle), but they did not know much about it. As a result of being on the ground with a forester during the inspection of the property, they now knew what to look for and actions that they could take to prevent and control the problem.

A number of others commented that they had never really considering asking more than one interested timber buyer for bids on their timber, or realized that they could have a say in which trees were to be harvested. Still others said that they had never previously given any thought to how their timber sales affected wildlife, and how various cutting practices could be used to enhance wildlife habitat.

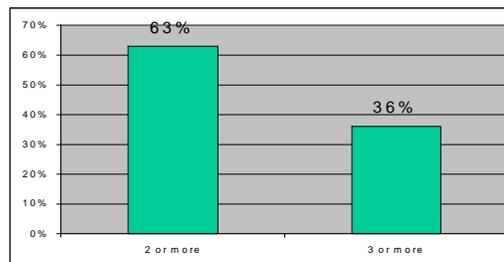
The majority of program participants have begun to manage for multiple forest resources. One of the major goals of the FSP is to encourage NIPF owners to practice multi-purpose management, which we defined as management in two or more of the following resource areas:

- Growing trees or caring for their health, such as planting trees, thinning trees, or fighting tree pests or diseases.
- Harvesting or marketing your trees, such as which trees to cut or when to cut and sell them.
- Improving or preserving your forest land as habitat for wildlife, including mammals, birds, fish, or other wildlife.
- Improving or preserving the quality of water resources like developing filter strips near ponds, fencing off streams from livestock, or reducing soil erosion near rivers or lakes.
- Agroforestry, such as building windbreaks or blending the growing of trees with cropping or pasturing.
- Some other purpose.

Almost two-thirds of the national respondents had begun to manage for two or more types of resources

and over one-third for three or more types (figure 3). Looking at the regions, between 55 percent (Pacific) and 68 percent (South) had begun to carry-out activities for two and more resources, and from 31 percent (Pacific) to 42 percent (South) had begun to

Figure 3. Percentage of owners who have begun to implement activities for two or more management purposes



manage for three or more resources.

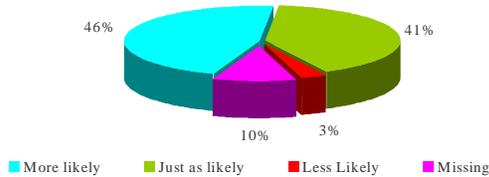
The combination of growing and protecting trees *and* wildlife activities emerged as the clear favorite for multi-purpose management in all regions, and especially in the South, where over half of the participants made this selection.

Participants were most likely to make improvements for wildlife, but benefits were noted for other resources also. Of the national sample, 46 percent of respondents said that as a result of FSP they were likely to make improvements in wildlife habitat, as compare to 3 percent who were less likely to do so (figure 4). Several of owners in the latter group said they already had too many white-tailed deer, although one respondent mentioned problems with elk. Comparable results were observed in the regions with the exception of the Pacific region, where only 39 percent were more likely to manage for wildlife and 4 percent were less likely. We could not determine from this study the cause for this lower rate. However, Johnson et al. (1999) have reported that NIPF owners with larger forest holding in Washington and Oregon are concerned about restrictions on private rights due to threatened and endangered plant and animal species regulations, and have begun to alter their forest management practices.

The national (and regional) respondents further reported other favorable changes attributable to FSP: 35 percent were more likely to make improvements in water quality as contrasted to 7 percent who were less

likely to do so; and 29 percent were more likely to harvest timber, compared with 18 percent who were

Figure 4. Many owners were more likely to improve wildlife habitat due to FSP



less likely.

We know from USDA Forest Service timber inventories that many NIPF owners cut their lands too frequently and too severely, so the tendency of some owners to reduce timber harvesting activities during the current planning period, may well be the best forest stewardship decision. FSP may also have prompted owners to modify their timber harvesting to benefit wildlife through such practices as leaving groves of conifers for winter cover, older stands of trees for cavity nesting birds or mast production, and uncut buffer strips along streams.

FSP alone has prompted many owners to spend personal funds to install practices recommended in their plans. But the effect is much larger when FSP is complemented by cost sharing and by followup planning assistance. By 1998-99 when the owners with active plans were surveyed, they had already spent an average of \$2764 in personal funds for which they did not expect to be reimbursed (figure 5). This can be further broken down to personal expenditures of almost \$1600 for owners who did not receive cost share assistance and over \$3600 for those who did receive cost share assistance for practice installation.

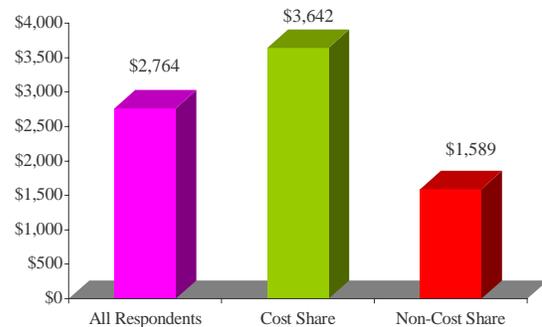
Two other methods were employed to test the effects of cost sharing on owner performance. First, we asked recipients if they would have done as much to implement their plans if they had not received cost share assistance: 63 percent said “no;” 9 percent, “maybe;” and 26 percent said “yes.” Second, we applied logistical regression analysis and found that

owners who received cost sharing were 2.9 times more likely (compared with all FSP participants) to have begun to implement their plans, 1.4 times as likely to be applying practices for at least two purposes and 1.3 times as likely to be engaged in new practices.

These numbers are multipliers. For example, 84 percent of all participants had begun to implement their plans while 16 percent had not, so the base odds of plan implementation are 84:16 or 5.25:1. With cost sharing the odds jumped to 15.2:1 (5.25 x 2.9).

Regression analysis further indicates that providing follow up planning assistance to owners with existing plans yields a high payback. Participants receiving

Figure 5. Average unreimbursed expenditures per owner with an active plan



this assistance (as compared to all participants with active plans) were 3.1 times more likely to have begun to implement their plans, 2.0 times more likely to be applying activities for at least two activities and 1.6 times more likely to undertake new-to-them activities.

Most owners gave FSP a thumbs up. In order for public forestry programs to be used by private landowners they must serve the owners’ needs. In this regard we found:

- 93% said their plans were easy or very easy to understand
- 85% said the paperwork involved to be easy or very easy to understand
- 94% would recommend FSP to others

Summary and Conclusion

The survey of FSP participants was national in scope and provides information for four major regions. We focused on whether, and to what extent, the program is achieving its congressional goal of promoting the sustainable management of NIPF ownerships to meet future public needs for forest products and environmental benefits.

We conclude that FSP is off to an excellent start by virtually all measures employed. The program is attracting many NIPF owners who previously had never had contact with resource professionals on the management of their forests. It is encouraging to see that 92 percent of owners consider themselves to be actively implementing their plans and that 84 percent have actually begun to install practices on the ground. Frequently, these are things that the owners have never done before and feature multiple resources.

One major qualification applies to these findings: the owners we interviewed in 1998-1999 had entered the program in the early to mid-1990s when federal forestry cost share assistance programs—although never fully funded at authorized levels—were much more widely available than they are today. This is potentially a critical issue, since we found that while FSP alone can produce desirable results, cost share programs have a multiplier effect on the rate of program implementation, as well as on owner expenditures for new and multiple resource practices.

Congress has provided no funding for the *Stewardship Incentive Program (SIP)* for the past two years (FY 1999 and 2000). As the companion program for FSP, SIP is the *only* federal forestry program that can provide financial assistance to private landowners for the full range of activities recommended in Stewardship Plans.

Further, the *Agricultural Conservation Program (ACP)*, which included forestry practices to protect and enhance soil and water resources and to promote woodlot management, has been eliminated, and its replacement, the *Environmental Quality Incentive Program (EQIP)*, has provided very little funding for forestry practices. Finally, the *Forestry Incentives Program (FIP)*, which is designed to enhance timber production and environmental benefits on NIPF ownerships, is currently funded at only one-half of its previous level.

These developments raise questions as whether FSP will continue to enjoy the high level of successful accomplishment we observed in this evaluation.

Additional details on the study design, methods and findings are available in Esseks and Moulton (2000a and 2000b).

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