



## **A Community-based Forestry Cooperative for Certified Wood**

*by* Marc McDill et al.  
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*“Contributing to the well-being of small towns and rural communities.”*

## FINAL REPORT

Date of Submission: April 15, 2002

Title of Project: **A Community-based Forestry Cooperative for Certified Wood**

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## EXECUTIVE SUMMARY

This is the final report for the project *Community-based Forestry Cooperative for Certified Wood*. The purpose of this project was to provide a catalyst for establishing a community-based forestry cooperative in the Sideling Creek, Town Creek, and Fifteen-mile Creek watersheds, located in Bedford and Fulton counties in south-central Pennsylvania and Allegany and Washington counties in north-central Maryland. The key goals of the study were to explore the interest in a forestry cooperative among local landowners and to explore the interest in obtaining forest certification for the lands in the cooperative. Forestry cooperatives offer small landowners many opportunities to improve forest management and a means to pool their resources to potentially obtain better prices for their products and obtain services at lower cost. Green certification of forests and forest products can improve forest management, open up new markets for local products, and potentially provide higher prices to landowners and mill owners.

The project was carried out in three stages. First, focus groups were held with local forest landowners, forestry consultants, and sawmill owners. The purpose of these focus groups was to provide the project team with a better understanding of local issues and attitudes toward the region's forest resource and its management. A mail survey of landowners was conducted during the second stage of the research. The primary objective of the survey was to assess landowner knowledge and interest regarding forestry cooperatives and forest certification. The survey also asked landowners about their reasons for owning forest land, their concerns about issues that were raised by the focus groups, their interest in conducting various management activities on their land, and how likely they were to seek professional assistance in carrying out those activities. Finally, the survey results were presented at an informational meeting with landowners. The purpose of this meeting was to inform interested local landowners, forestry professionals, and mill owners of the results of the survey and, ideally, to establish a steering committee of local landowners, forestry professionals and mill owners that would pursue the establishment of the forestry cooperative.

Overall, the survey results paint a picture of a very diverse population of forestland owners in the study region. Reasons for owning forestland are similarly diverse. The most commonly-held reasons for owning the land were "to preserve natural beauty and wildlife," "to live in a rural area," "personal residence," and "to pass on to heirs." Economic values such as "growing timber and other forest products" and "land investments other than farming or timber" were generally among the least important reasons for owning forestland. "Controlling insects and diseases," "forest regeneration" and "timber stand improvement" were the management activities that respondents rated as most important. These are activities that a forestry cooperative could potentially assist landowners with. While the respondents did not generally consider "timber sales" to be important, it is the activity they have been second-most likely to have carried out in the past – after "extracting non-timber forest products" – and respondents were relatively likely to seek professional help with timber sales. Thus, providing professional assistance with timber sales would also be a useful service that a forestry cooperative might provide.

While a relatively small percentage of respondents (9%) expressed interest in joining a forestry cooperative, this still represents a potential core group of 30 or so individuals, enough to form a small cooperative. Furthermore, there is also a significant group of other landowners that might be interested in a cooperative if they were provided with more concrete information about how it would work and what benefits it might offer to them. Most of the landowners who were surveyed (57%) knew "nothing at all" about forest certification before receiving the survey. Interest in certification was relatively weak. By far, the most important reason cited by landowners for becoming certified was "knowledge that [their] land was

properly managed.” “Better prices for your timber” and “access to markets” were considerably less important to the landowners.

A basic question asked in this study was: what is the potential for a forestry cooperative in the study area? The answer to this question seems to be that the potential is there. Two active landowner associations already exist in the area, and there is a core group of at least 30 people who are interested in forming a cooperative. Over a hundred survey respondents indicated that they were potentially interested in a cooperative, but that they need more information. At least 40 people were interested enough to come to the informational meeting that was organized as the final activity for this project. Eleven individuals volunteered to continue the discussion as an informal steering committee for the potential cooperative. Two meetings have been held to discuss the potential for a forestry cooperative and how to get it off the ground. Next steps involve identifying more landowners who are willing to commit to the idea of the cooperative and refining the vision of how the cooperative will be organized. Further progress will depend critically on whether a leadership group emerges that has the energy, vision, and the confidence of enough people to move the cooperative from the concept and discussion stage to reality.

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## INTRODUCTION

This is the final report for the project *Community-based Forestry Cooperative for Certified Wood*. The purpose of this project was to provide a catalyst for establishing a community-based forestry cooperative in the Sideling Creek, Town Creek, and Fifteen-mile Creek watersheds, located in Bedford and Fulton counties in south-central Pennsylvania and Allegany and Washington counties in north-central Maryland. The key goals of the study were to explore the interest in a forestry cooperative among local landowners and to explore the interest in obtaining forest certification for the lands in the cooperative. Furthermore, the project would work with local sawmills to explore interest in obtaining chain-of-custody certification to complete the linkage from certified forest lands to the marketing of certified wood products. Overall, the project provided initial steps toward creating a climate of cooperation and coordination between forest landowners and mill owners, with the goal of making the forestry cooperative and green certification work in the area to the advantage of the entire community. Data were collected through focus group discussions, a survey of forest landowners in the study region, and conversations with local mill owners. One outcome of the project was that a steering committee of local private forest and mill owners was identified to further explore how a cooperative might be organized. Whether or not the a cooperative will be formed, whether it will be green certified, and what will be the relationship between the cooperative and local mills are still open questions.

Sustainable forest management practices can provide long-term sources of income and employment in regions like south-central Pennsylvania, while protecting the region's biological resources. More often than not, however, landowners sell their timber at prices well below fair market values because they often are poorly informed about forest products markets. Furthermore, a lack of forest management knowledge and a focus on short-term gains often leads to "high-grading" – where only the most valuable timber is harvested – and other management practices that degrade the ecological quality and long-term productivity of the forest. Unsustainable harvesting practices can have a critical impact on a region by depleting the genetic resources and diversity of the forest, degrading the soil, reducing water quality, and critically affecting aquatic and terrestrial species.

Forestry cooperatives offer small landowners many opportunities to improve forest management and a means to pool their resources to potentially obtain better prices for their products and obtain services at lower cost. Because a cooperative can potentially provide a steady source of quality raw material, loggers, mill owners, and professional forestry service providers may have more incentive to offer competitive prices to the cooperative's members. Logging costs and the costs of other forest management practices can be reduced by coordinating and consolidating activities over larger areas. Additionally, some forestry cooperatives have invested in their own processing facilities, thus improving on members' profit margins by capturing more of the added value of the lumber production process. Also, cooperatives offer many intangible benefits, including confidence among members that their forests are well managed and that they are obtaining fair prices for their timber, information sharing among members, and better communication among neighbors about what is happening on their land (Nadeau et al. 2000).

Green certification of forests and forest products can improve forest management, open up new markets for local products, and potentially provide higher prices to landowners and mill owners (Simpson 1998, SmartWood 1996, Aguirre et al. 1998). The Forest Stewardship Council (FSC), a non-profit group based in Mexico, is a key organization responsible for overseeing forest certification worldwide. In the FSC approach to forest certification that has been applied in the U.S., landowners obtain a seal of approval from an independent, FSC-accredited body. This seal guarantees that certified forests are well managed

and that certified forest products are produced under internationally recognized FSC principles and criteria for forest stewardship. Certifying forest products involves tracking and certifying the entire chain of custody of forest products from the forests to the mills to the retail outlets for consumers (Baharuddin 1995). Thus, both forestland ownerships and forest products manufacturers must be certified in order to produce a certified product.

One of the problems with green certification is the “chicken and egg problem,” where landowners have limited incentives to obtain certification without markets for their certified wood, and mills’ incentives are limited without local sources of certified wood. Another problem is that green certification may not be cost-effective for individual small landowners (Davis 1997, \*\*\*). However, coordination and cooperation among landowners and mill owners can help overcome these problems. A community-based forestry cooperative can provide a cost-effective way for forest landowners to obtain certification, share forest management expertise and marketing information, and negotiate marketing agreements with local mills and forestry services suppliers. Landowners would capture some economies of scale through joint planning and management, thus reducing their management costs. This will help forestland owners become more competitive in timber markets, enhancing economic opportunities for rural development. Mills can also potentially benefit by having certain guarantees regarding the availability of certified wood, giving them an additional incentive to incur the initial costs of obtaining chain-of-custody certification. The long-term payoff for mills is an increased ability to sell their products in international markets and certain niche markets in the US. This translates into mills becoming more competitive in national and global economies.

In order to preserve the traditional agricultural and forest-related economies of places such as the three watersheds studied here, it is important to identify sustainable sources of income related to the forest resource. Green certification is one opportunity because it encourages sustainable management practices and has the potential to provide economic benefits through higher prices for certified timber, expanded markets, and more cost-effective forestry operations. A community-based forestry cooperative can provide forest landowners with a cost-effective means of obtaining certification and sharing forest management expertise and marketing information. Certification also provides local mills access to growing national and international markets that are increasingly demanding green certified products. Information-sharing through a community-based forestry cooperative should contribute to sound forest management in areas previously subject to unsustainable logging practices. This will have a positive impact on the natural resource base. Local communities will benefit from knowing their economic base is more stable and that the environmental values of their local forests and watersheds are being protected.

## **STUDY AREA**

The study area included the Sideling Hill Creek Watershed, Town Creek Watershed (each comprise approximately 100 mi<sup>2</sup>), and the Fifteen-mile Creek Watershed (approximately 50 mi<sup>2</sup>). Together these watersheds extend into Bedford and Fulton counties in south-central Pennsylvania and Allegany and Washington counties in Maryland. The Sideling Hill Creek watershed is considered one of the most pristine streams of the Chesapeake Bay watershed and is a nationally recognized conservation priority site because it hosts 44 state and globally rare and endangered species. The stream hosts the best known population of the globally endangered plant harperella; the most diverse freshwater mussel fauna in the Potomac River drainage – including two globally endangered species – and a number of the best shale barren ecological communities in the state. The area also contains a number of high quality floodplain forests, which are of particular conservation significance both because of their unique ecological

characteristics and because of their increasing rarity in the region. Seventy-five percent of the Sideling Hill Creek watershed is forested. Most of the remainder of the area is in agriculture, and a small percentage (3 percent) has been developed. The Town Creek and Fifteen-mile Creek watersheds were included in the study area because an active landowner association already existed in Town Creek, providing contacts for a large number of potentially interested landowners. To maintain contiguity, the Fifteen-mile Creek Watershed, which lies between the Sideling Hill and Town Creek watersheds and is similar in terms of land use, was included. Reaching more people who might be interested in joining a cooperative was expected to improve its long-term viability.

The forests in the study area are primarily oak-hickory, with some northern hardwood and oak-pine communities. Like many rural American communities, many residents of the study area depend on the forestry and agriculture industries. In spite of a rich natural resource base, however, the area is economically deprived, with average annual household incomes well below the national average. Furthermore, much of the current exploitation of these natural resources is potentially unsustainable. A declining agricultural base, together with few economic alternatives, adds pressure on forest landowners to realize short term economic gains through the sale of timber from their lands. Additionally, housing development for commuters and second homeowners from the Baltimore, MD and Washington, DC areas has increased pressures for landowners to harvest their timber and sell their land for residential development.

## **PROGRESS ON OBJECTIVES**

The overall goal of the project was to evaluate the climate of cooperation and coordination between forest landowners and mill owners to help establish an environment where green certification might work in the area to the advantage of the entire community. The specific objectives of this project were to:

1. identify specific advantages of and barriers to a community-based forestry cooperative for private forest landowners and mill owners in the area,
2. develop a framework for organizing the cooperative and for the relationship between the cooperative and certified mills,
3. establish a steering committee of local landowners to take leadership in establishing the cooperative,
4. bring both parties (private forest landowners and mill owners) to the table to talk about and plan for the proposed cooperative.

The project was carried out in three stages. First, focus groups were held with local forest landowners, forestry consultants, and sawmill owners. The purpose of these focus groups was to provide the project team with a better understanding of local issues and attitudes toward the region's forest resource and its management. A mail survey of landowners was conducted during the second stage of the research. The primary objective of the survey was to assess landowner knowledge and interest regarding forestry cooperatives and forest certification. The survey also asked landowners about their reasons for owning forest land, their concerns about issues that were raised by the focus groups, their interest in conducting various management activities on their land, and how likely they were to seek professional assistance in carrying out those activities. Finally, the survey results were presented at an informational meeting with landowners. The purpose of this meeting was to inform interested local landowners, forestry professionals, and mill owners of the results of the survey and, ideally, to establish a steering committee of local



landowners, forestry professionals and mill owners that would pursue the establishment of the forestry cooperative.

**Focus Groups.** Focus groups were held on February 13, 15, and March 22, 2001. Forestry professionals and a sawmill owner were invited to participate in the first focus group. The second focus group targeted local forest landowners. The first two focus groups were relatively unstructured. The objective was to learn about the concerns, problems, and potential solutions related to the region's forest resources, as perceived by local forest landowners, sawmill owners, and forestry professionals. The discussions were organized around four general topic areas: 1) the current condition of the region's forests and problems affecting their condition; 2) key issues and problems related to the region's forest resources; 3) participants' views on forest certification; and 4) expected benefits and problems associated with a potential forestry cooperative. The third focus group included a presentation by Jim Birkmeier, a forest cooperative manager from Wisconsin, and the discussion was primarily about how a forestry cooperative might be organized.

On the whole, the focus group participants were concerned about the condition of the area's forests. Many problems were discussed, but the primary ones were regeneration problems and forest health. Regeneration problems were largely attributed to extensive deer browsing and poor harvesting practices, such as diameter-limit cutting and other forms of high-grading. The main forest health concern was gypsy moth, but other invasive non-native species were also mentioned by several participants. These problems were viewed by the focus group participants as nearly intractable. Spraying was identified as the primary solution to the gypsy moth problem, but the cost was considered prohibitive for small landowners. Unsustainable harvest practices were attributed to over-emphasis on financial returns and landowners' lack of knowledge about forest management. Deer populations are controlled primarily by the Pennsylvania Game Commission, which was perceived as unresponsive to landowners' concerns. As one participant put it: "If farmers, who are well organized, can't influence the Game Commission, how are forest landowners going to be heard?"

Focus group participants were also concerned that the area is losing its "rural character" as retirees and commuters purchase land at increasing rates: "City people have their pockets full of money and come in here, and they buy up all this land." While this was generally viewed as an inevitable trend, some felt that the tide of development could be held back to some degree if the economic returns to traditional rural occupations, such as farming and forestry, could be improved: "Unless we provide opportunities for people continuing to live the rural life, rural life is really at risk." A lack of communication and understanding between long-term local residents and newcomers was also perceived, leading to what one participant termed "cultural fragmentation." While access to forest resources for hunting and recreation had been fairly open when all of the people in the community knew each other, newcomers often post their properties, sometimes leading to friction between newcomers and long-term residents.

A major difference was perceived in the values of newcomers and long-term residents. Long-term residents typically needed to, or at least expected to, earn part of their living from their land, while newcomers were often not interested in financial return and were more interested in wildlife and recreation. Some viewed this as a positive trend, arguing that these newcomers could afford to make the investments needed to improve the condition of their forestland and would not be motivated by economics to apply destructive harvest techniques. As one participant put it: "People buy a substantial portion of land and are not driven by economics off of their land. They are interested in making the forest better. If we can reach those people, that's where sustainable forestry comes in Pennsylvania." Others felt that sustaining the rural

character of the region depended on ensuring that sustainable forest management could be profitable: “A forestry cooperative needs to support rural lifestyles.”

Most participants were not opposed to forest certification, but they were not particularly enthusiastic, either. In general, they thought that it would be nice to have the “seal of approval” provided by certification that the forest is well-managed, but they believed that certification was too expensive for small landowners. Furthermore, they were doubtful that certifying their forestland would result in better prices for their timber. Most landowners preferred to wait before “jumping on the certification bandwagon” until they saw others becoming certified and reaping significant benefits. The one sawmill owner who participated in a focus group was open to the idea of certification, but was similarly concerned about what it would cost him. He, too, wanted to wait before getting his mill certified until he was more certain that there would be significant benefits to doing so. He stated that the biggest barrier to him was the cost he would face in becoming certified, which would involve implementing a sophisticated tracking system so that wood from certified forests could be kept separate from the non-certified wood. He doubted that he could operate his mill solely on certified wood.

Landowners were similarly interested, but cautious about getting involved in a cooperative. The primary benefits they thought a cooperative might potentially provide were better prices for timber, more affordable professional forestry services, and improved information and educational opportunities. Landowners also hoped that a cooperative might help them organize more effectively to influence the Game Commission’s policies on the deer population and to obtain government subsidies for regeneration costs and spraying for gypsy moths. On the other hand, several landowners were strongly opposed to “more government intervention.” Some landowners expressed interest in investing in wood processing facilities, including a sawmill and a kiln, through a forestry cooperative.

Jim Birkmeier, who made a presentation at the third focus group meeting on his forestry cooperative in Wisconsin, emphasized the importance of capturing a higher value for landowners’ timber through additional processing, including sawing and kiln-drying. He argued that instead of getting 25-30 cents per board foot for stumpage, landowners could sell finished products, such as finished lumber and flooring, for as much as \$10 per board foot. While many of the landowners who were present were very interested in forming a cooperative that would be able to invest in sawing and drying facilities, others were skeptical of this approach. They did not want to invest such a large amount of capital in the cooperative. They argued that there was already plenty of sawmilling capacity in the region and were doubtful that the coop would be able to saw logs into lumber at a lower cost than the existing sawmills.

A key factor that all agreed on was that leadership was critical to a successful cooperative. The leaders would have to be people that everyone could trust and who had the confidence of many people. Some concerns were expressed that the people currently providing the leadership to the local landowners’ associations, including the Woodland Owners of the Southern Alleghenies, or WOSA, and the Town Creek Watershed Association were already over-committed. Most agreed that the leaders would have to be local landowners and not professional foresters or academics. Jim Birkmeier, in particular, expressed concerns about the influence of professional foresters and academics. More information about Jim Birkmeier’s views about forestry cooperatives can be found at <http://www.timbergreenforestry.com>.

**The Survey.** The focus groups provided the project team with a rich understanding of the important forestry issues in the study area, local concerns and attitudes regarding forest management issues, and potential interest in certification and a possible forestry cooperative. This information was used to develop a survey instrument to provide quantitative information about the characteristics of the landowners

in the study area and their knowledge of and attitudes about forest certification and cooperatives. The survey was developed and administered using Dillman's (1999) Tailored Design Method. It was developed between March and May, 2001, including being pre-tested by some WOSA members attending their annual meeting on March 31. The survey was performed in June and July, 2001. A copy of the survey, including response frequencies, is included as Appendix A.

The address list for the survey was compiled from tax records for the four counties containing the three watersheds. Landowner lists from the four counties were screened by including only parcels in townships that contained a significant area of the three watersheds (we were not able to directly determine whether a parcel was in a particular watershed). Additionally, only parcels of at least 20 acres – not necessarily forestland – were included. In general, it was not possible to identify whether the land included forestland or not. An effort was also made to eliminate duplicate records for individuals owning more than one property, but, again, it was generally not possible to be sure whether parcels with matching names were owned by one person or whether they were owned by different people with the same name. The final mailing list consisted of 513 landowners from Pennsylvania and 387 landowners from Maryland, for a total of 900. No sampling was necessary because sufficient funds were available to send the survey to all 900 landowners in the mailing list.

The first mailing of the survey went out on June 13, 2001, followed by a reminder postcard on June 20. A second mailing, including a new copy of the survey, was mailed on June 27, with a second reminder postcard on July 5. Of the 900 addresses in the original list, 84 surveys were returned as undeliverable, 29 were returned indicating that the parcel did not include any forestland or that the addressee no longer owned the land, and 6 were returned indicating that the addressee had received two surveys. Thus, at most 781 surveys were delivered to unique forestland owners. A total of 345 usable surveys were returned, representing a 44.2% response rate based on the adjusted population of 781. The response rate was roughly equal for both Pennsylvania and Maryland. Sixty percent (205) of the respondents owned forestland in Pennsylvania, and 43 percent (148) of the respondents owned forestland in Maryland; three percent reported that they own forestland in both states.

The survey was divided into four main parts. The first part asked respondents about their forestland, their ownership goals, and their management practices. The second and third sections asked respondents about their knowledge and attitudes about a forestry cooperative and forest green certification, respectively. The fourth section requested demographic information about the respondents, including their age, their occupations, and their incomes. Figures 1 through 25 illustrate many of the survey results.

The area of forestland owned by the survey respondents was fairly evenly split between small (10-49 acre), medium (50-99 acre), and large (100-499 acre) tracts (Figure 1). This result seems inconsistent with Birch (1996), who found that the average tract sizes for non-industrial private forestland in Maryland and Pennsylvania were 17 and 25 acres, respectively. However, this comparison is complicated by the fact that we did not include landowners with parcels smaller than 20 acres (not necessarily 100% forested) in our survey while Birch (1996) included owners with as little as one acre of forestland. Eleven respondents (3%) reported owning less than 10 acres of forestland, and seven respondents (2%) reported owning more than 500 acres. Respondents typically also owned substantial amounts of non-forest land. Only 30% reported that 80 to 100

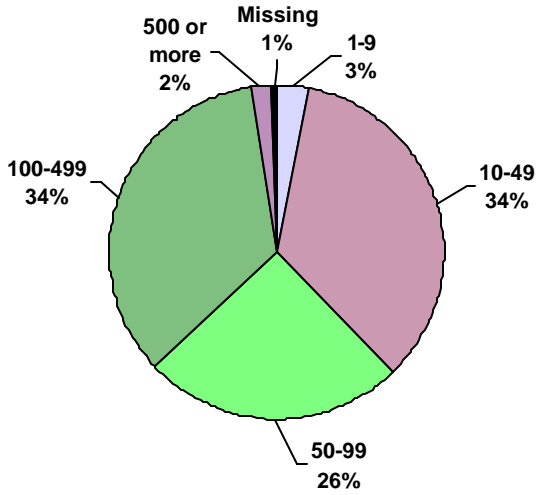


Figure 1. Acres of forestland owned.

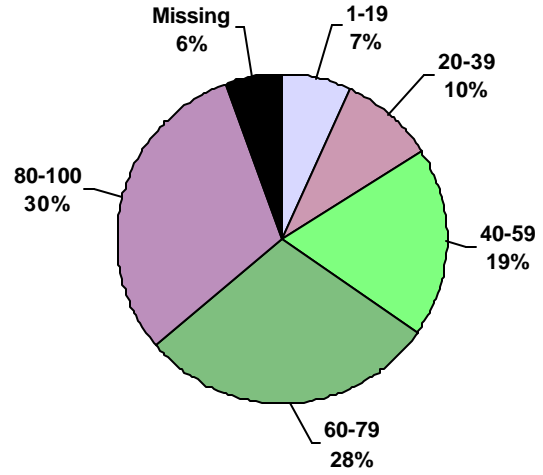


Figure 2. Percent of land that is forested.

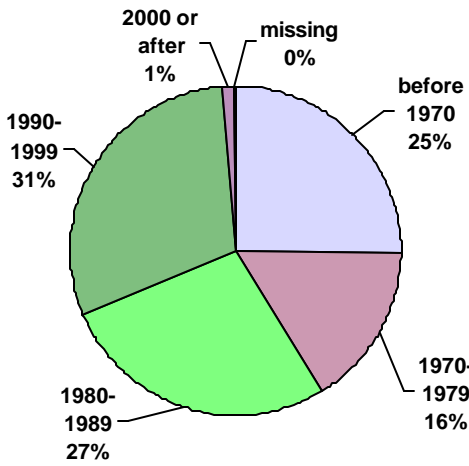


Figure 3. When property was acquired.

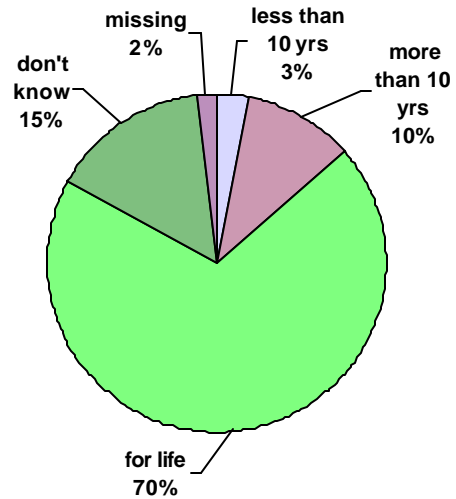


Figure 4. Expected length of ownership.

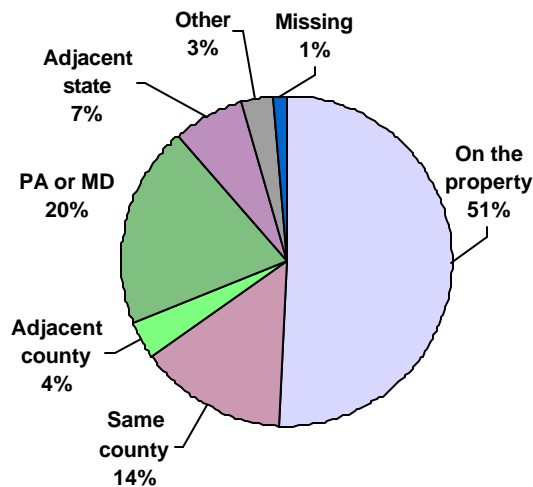


Figure 5. Where landowners live.

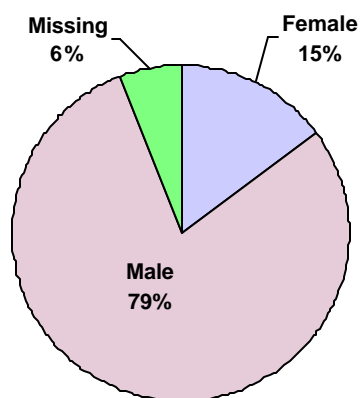


Figure 6. Respondents' gender.

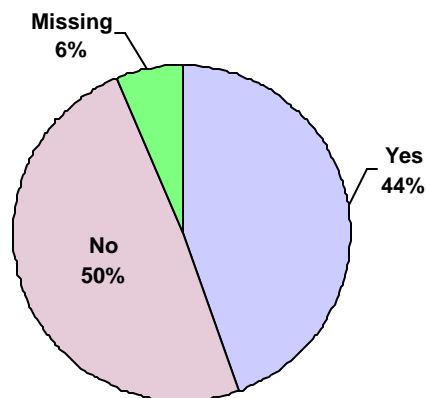


Figure 7. Respondents who are retired.

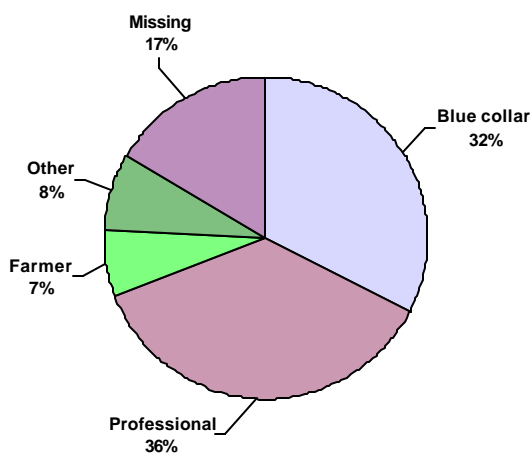


Figure 8. Respondents' occupations.

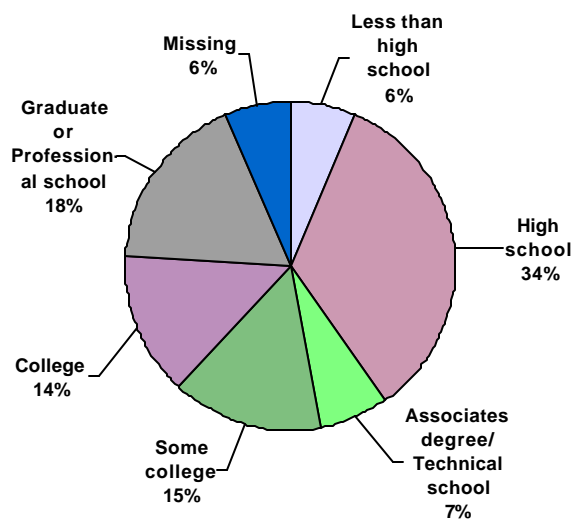


Figure 9. Respondents' level of education.

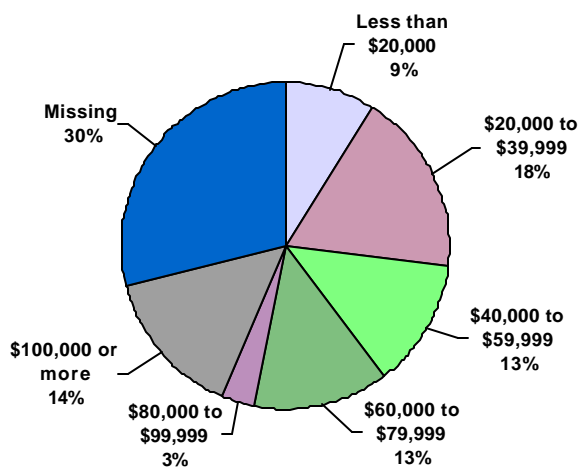


Figure 10. Respondents' household income.

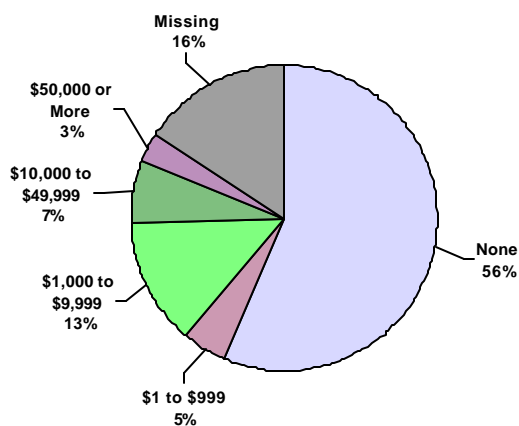
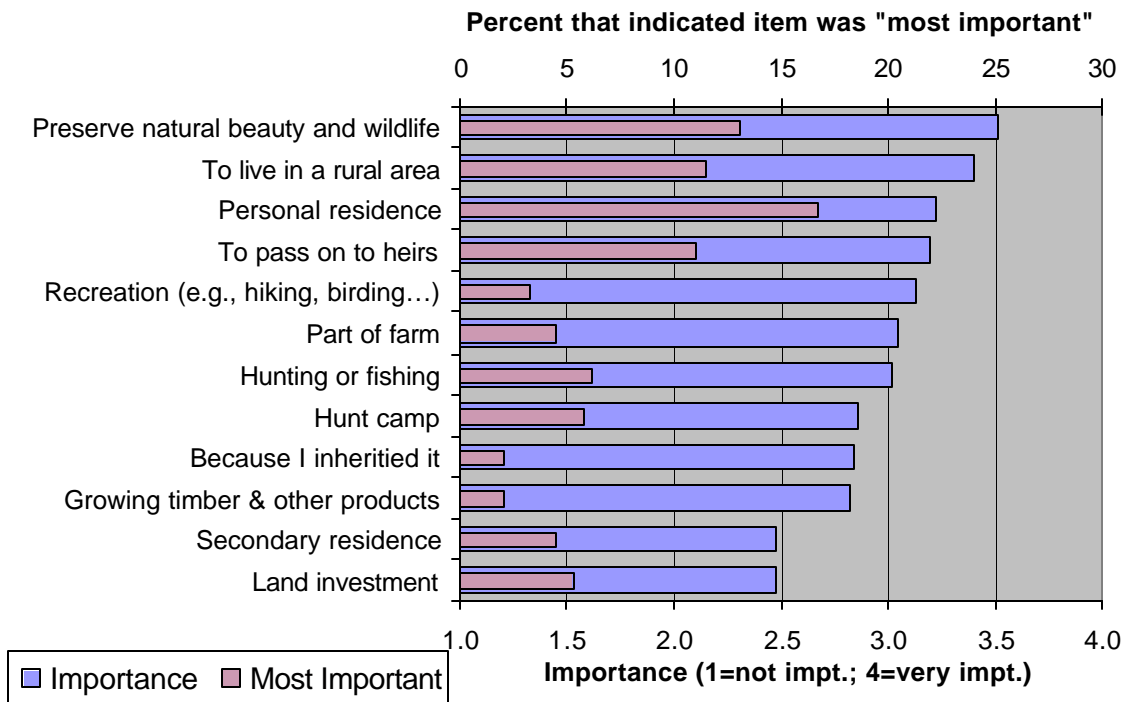
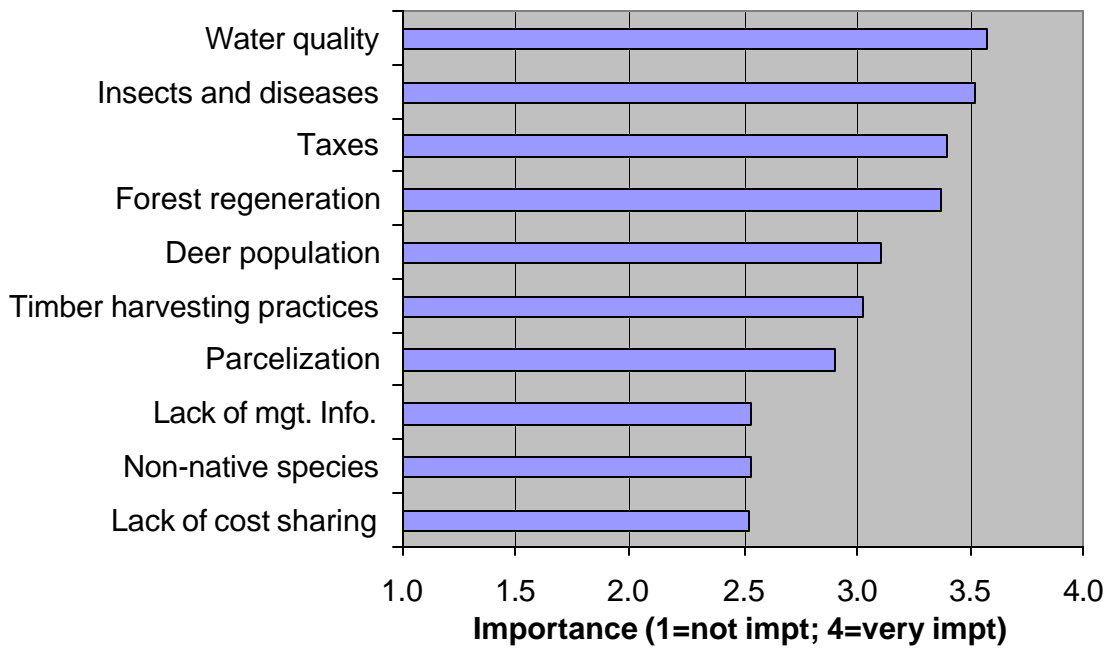


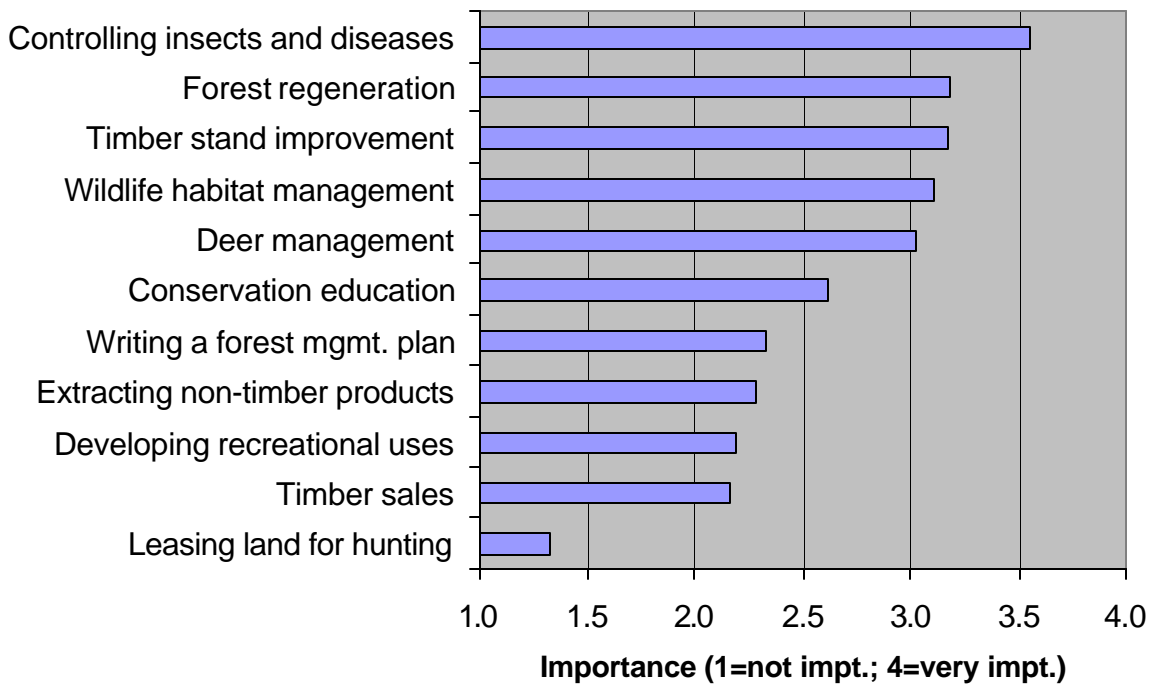
Figure 11. Total income from forestland over the past 10 years.



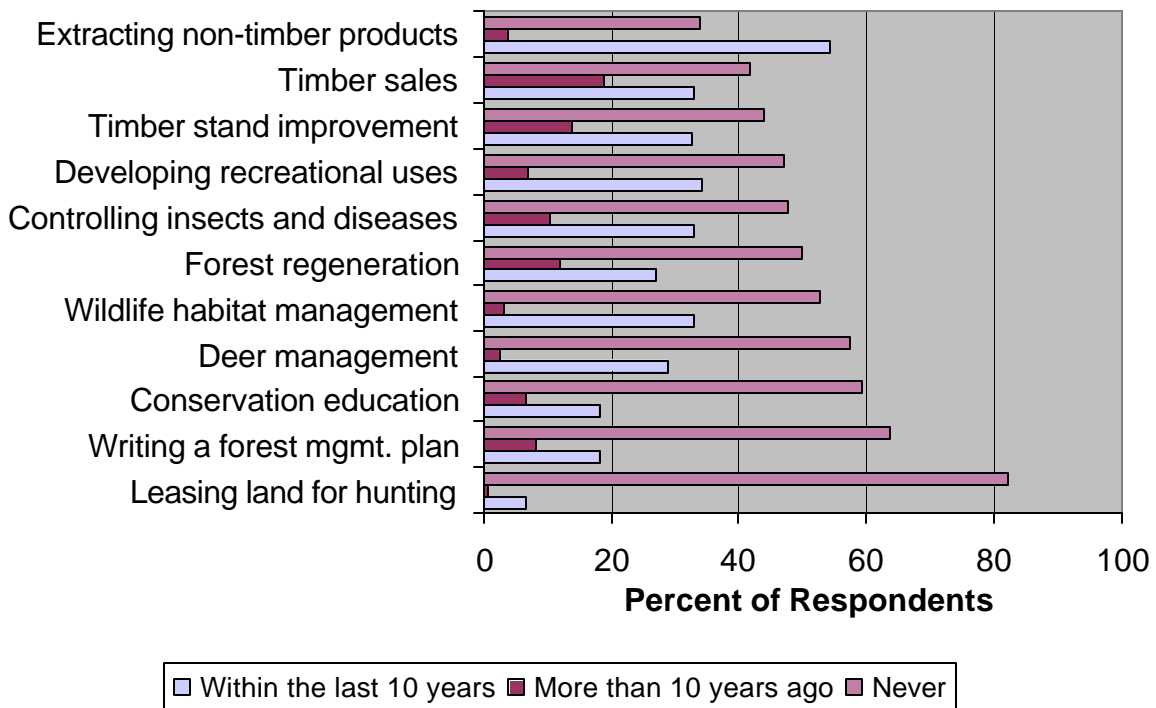
**Figure 12.** Importance of different reasons for owning forest land. (Smaller bars indicate the percentage of respondents who indicated that reason was the most important.)



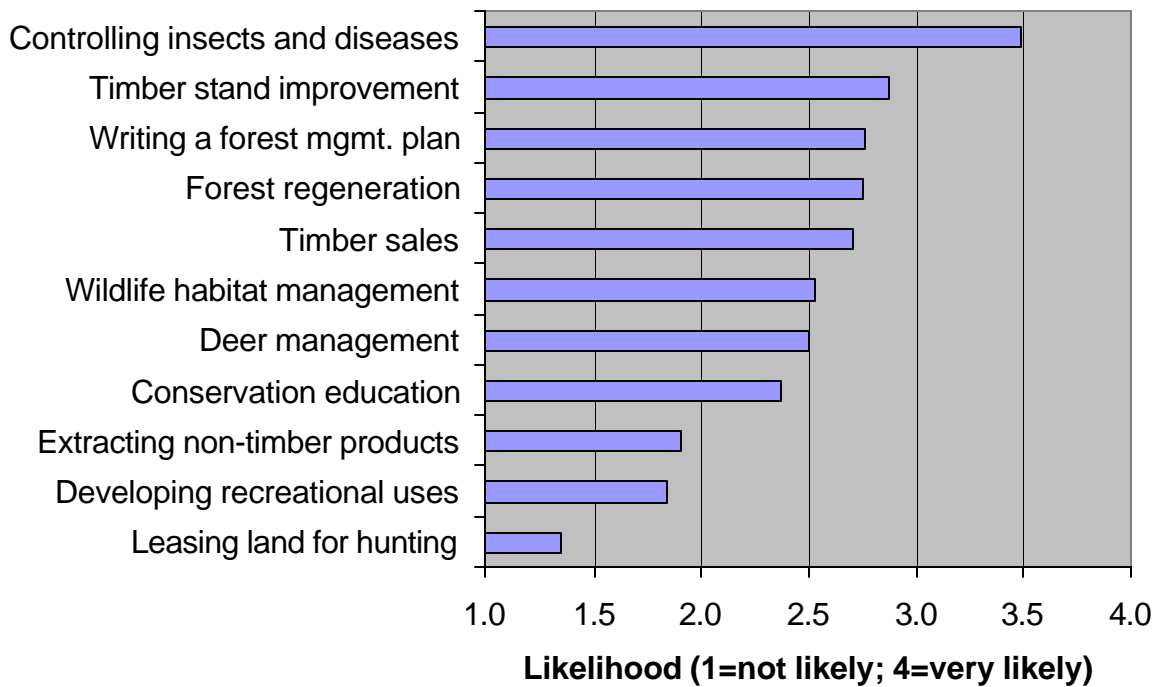
**Figure 13.** Relative importance of different forest issues.



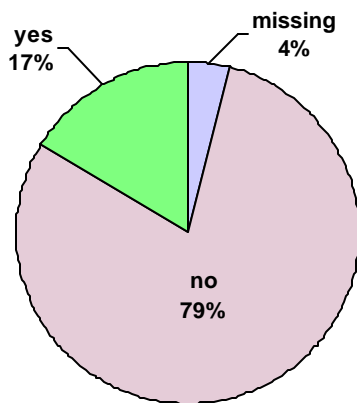
**Figure 14.** Relative importance of different management activities.



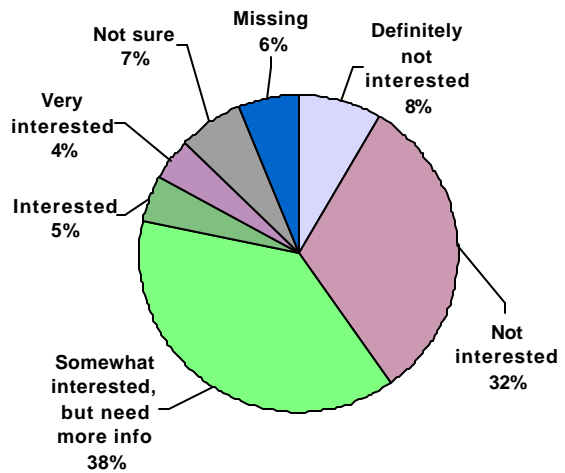
**Figure 15.** If and when different management activities were conducted.



**Figure 16.** Likelihood of using professional assistance if different management activities were conducted.

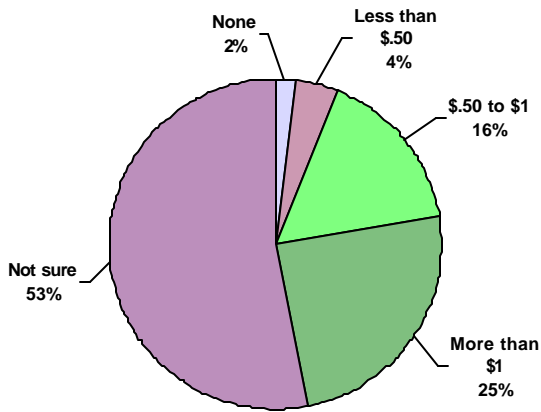


**Figure 17.** Percentage of respondents who belong to a cooperative or landowners' association.

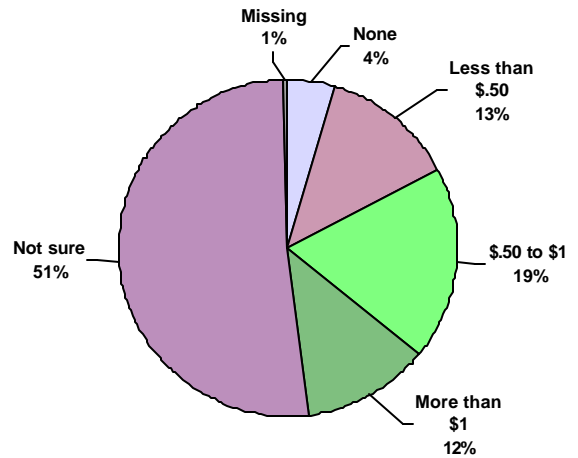


**Figure 18.** Interest in joining a local forestry cooperative.

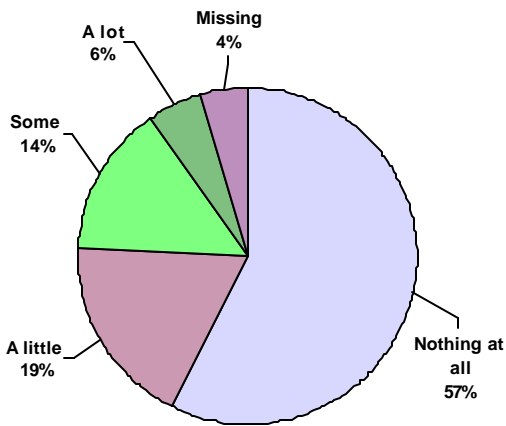




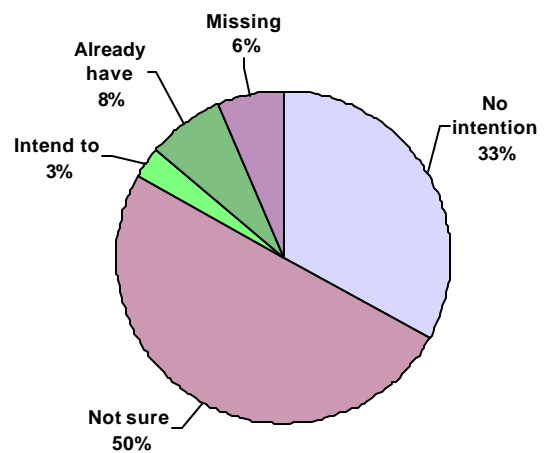
**Figure 19.** Maximum one-time capital investment respondents would be willing to make per acre (only respondents who were at least “somewhat interested” in joining a forest landowners’ cooperative).



**Figure 20.** Maximum amount respondents would be willing to pay per acre per year for coop dues (only respondents who were at least “somewhat interested” in joining a forest landowners’ cooperative).



**Figure 21.** Respondents’ knowledge of forest green certification prior to reading survey.



**Figure 22.** Respondents’ degree of interest in having their property green certified.



**Figure 23.** Benefits respondents expect to obtain from green certification, broken out by interest in certifying their forestland.

percent of their land was forested (Figure 2). Larger parcels of land were significantly more likely to be more heavily forested ( $p < 0.001$ ).

Respondents were fairly evenly divided between relative newcomers and long-time residents. About a third (31%) have acquired the majority of their forestland since 1990, while a quarter (25%) reported owning their forestland before 1970; the remaining 43% reported acquiring the majority of their forestland between 1970 and 1990 (Figure 3). Most (80%) acquired at least some of their forestland through purchase. The remainder acquired their properties through either inheritance (19%) or gifts (7%).<sup>1</sup> A large majority (70%) intend to keep their property for the rest of their lives (Figure 4). Roughly half (51%) of the respondents live on their forested property in the study region (i.e., the property of interest in this study) (Figure 5). About 14 percent live in the same county as their property, and 4 percent live in an adjacent county. Twenty-seven percent of respondents do not live in the same county or even an adjacent county, but at least live in Pennsylvania, Maryland, or an adjacent state. Three percent live do not live in Pennsylvania, Maryland, or an adjacent state. For those not living on their forested property in the study region, the median distance between their residence and the property is 90 miles.

The survey respondents are very diverse. They are predominantly (>80%) male (Figure 6). The respondents are also older than the general population. The average age reported by respondents was 59

<sup>1</sup> Percentages do not sum to 100 because some respondents acquired forestland in more than one way.

years, and at least half are retired (Figure 7). About one third (32%) reported blue-collar occupations (e.g., carpenter, mechanic, truck driver), and about one-third reported professional occupations (e.g., accountant, engineer, teacher, physician) (Figure 8). Only 7 percent identified themselves as farmers. Another eight percent identified themselves with miscellaneous occupations such as homemaker, sales, and self-employed. About 17 percent did not identify their occupation. Respondents' level of education varied from less than high school (6%) to graduate or professional school (18%) (Figure 9), and they reported annual household incomes ranging from less than \$20,000 (9%) to more than \$100,000 (14%) (Figure 10). Nearly a third (30%) did not identify their income category.

Forestland ownership is not lucrative for most landowners. Most of the survey respondents (57%) reported that they had earned no income from their forestland over the last ten years (Figure 11). Only one in ten reported earning at least \$10,000 from their timberland over the last ten years. Only 3 percent reported earning more than \$50,000 over the past ten years. Even this amount averages out a mere \$5,000 per year. Of course, the amount of income a landowner can expect to receive from his or her forestland depends on the area owned. Of those owning less than 100 acres, one in four (25%) reported earning some income from their forestland over the last ten years. In contrast, one third (33%) of owners with more than 100 acres reported earning at least some income from their forestland in the last ten years. Less than one percent of owners of less than 100 acres reported earning at least \$50,000 from their timberland in the last ten years, while 6.5 percent of respondents with more than 100 acres of timberland reported earning at least \$50,000. All of the respondents who reported earning more than \$100,000 from their forestland over the last ten years owned at least 100 acres.

The survey also explored respondents' reasons for owning their timberland, their concerns about their forestland, and the management activities they have conducted. Survey respondents were asked to identify the importance of various reasons for owning forest land. A Likert scale ranging from 1 to 4, with 1 representing "not important" and 4 representing "very important," was used to measure importance. Using this scale, respondents rated amenity values such as "to preserve natural beauty and wildlife" and "living in a rural area" as most important (Figure 12), with average ratings of 3.5 and 3.4 out of 4, respectively. Next most important were "personal residence" (3.2) and "to pass on to heirs" (3.2). "Recreation" (3.1), "part of farm" (3.0), and "hunting and fishing" (3.0) were also relatively important. "Growing timber and other forest products" (2.8), "because I inherited it" (2.9) and "hunting camp" (2.8) were relatively low on the list. Based on the average importance rating, the least important reasons for owning forest land were "secondary residence" (2.5) and "land investment" (2.5).

Respondents were also asked to identify the single most important reason for owning forest land (Figure 12). Each reason was considered "most important" by at least some landowners, indicating the diversity of land ownership values and objectives among landowners. Based on this measure, "personal residence" was the most important reason for the largest number of respondents (17%). The smallest number of respondents (2% each) identified "because I inherited it" and "growing timber and other forest products" as the most important reasons for owning forestland. Clearly, growing timber is not a high priority for these landowners. However, this should not be surprising, given the lack of income that they have received from their timberland in the past.

Respondents were asked to rank the importance of several forest management issues that had been identified by the focus groups (Figure 13). "Water quality" was rated most important, with an average importance rating of 3.6, based on the same four-point Likert scale used in the previous question. The second most important concern was "controlling insects and diseases" (3.5), followed by "taxes" (3.4) and

“forest regeneration” (3.4). The “deer population” (3.1), “timber harvesting practices” (3.0) and “parcelization” (2.9) were of intermediate concern to respondents. Of least concern were “lack of management information,” “non-native species,” and “lack of cost-sharing” (all rated at 2.5).

Respondents were also asked three questions about different management activities. The questions addressed 1) the importance of the management activities on the respondents’ forestland (Figure 14), 2) whether the respondents had conducted any of the management activities (Figure 15), and 3) how likely the respondents would be to use professional help if they did conduct the activities (Figure 16). Once again using a four-point Likert importance scale, respondents ranked “controlling insects and diseases” as most important (3.6), followed by “forest regeneration” and “timber stand improvement” (both rated 3.2). “Wildlife habitat management” (3.1) and “deer management” (3.0) were also considered somewhat important. “Conservation education” was considered moderately important (2.6). “Writing a forest management plan” (2.3), “extracting non-timber forest products” (2.3), “developing recreational uses” (2.2), and “timber sales” (2.2) were relatively unimportant. Somewhat surprisingly, “leasing land for hunting,” which has considerable potential for generating income, was decidedly unimportant to the survey respondents (1.3).

For each activity, respondents were asked to indicate whether they had conducted the activity on their property within the last ten years, more than ten years ago, or not at all (Figure 15). Interestingly, three of the most commonly practiced management activities – “extracting non-timber forest products,” “developing recreational uses,” and “timber sales” – are also among the activities respondents rated as least important. The majority of respondents (58%) indicated that they had extracted non-timber forest products, such as firewood or mushrooms, usually within the last ten years. A little more than half (52%) indicated that they had conducted a timber sale on their property at some time, and one third (33%) had conducted a timber sale within the last 10 years. This result was particularly interesting, since only one in ten respondents indicated that they had earned at least \$10,000 from their property within the last ten years. Evidently, the majority of these timber sales netted the landowner less than \$10,000. Paradoxically, twenty respondents – 18% of those indicating that they had conducted timber sales within the last ten years – indicated that they had earned no income from their property within the last ten years. An additional 38 percent of those indicating that they had conducted timber sales within the last ten years indicated that they had earned less than \$10,000 from their forestland within the last ten years. Only 24 percent of the respondents who indicated that they had conducted a timber sale within the last ten years also reported earning at least \$10,000 from their forestland within the last ten years. Many (21%) of those who indicated that they had conducted a timber sale within the last ten years did not indicate how much income they had earned from their forestland. On the other hand, six respondents who indicated that they had not conducted any timber sales within the last ten years, also reported that they had earned at least \$10,000 from their forestland in the last ten years. One of these six indicated that the land had been leased for hunting, and another respondent indicated that the land was used for an outdoor recreation business. There was no clear indication of how the others had generated this amount of income from their land.

After “extracting non-timber products” and “timber sales,” the most common activities reported by respondents were: “timber stand improvement” (46%), “controlling insects and diseases” (44%), “developing recreational uses” (41%), “forest regeneration” (39%), “wildlife habitat management” (36%), “deer management” (32%), “conservation education” (25%). Only about a quarter (26%) of the respondents reported ever having written a forest plan, and only 7 percent reported that they had leased

land for hunting. These last two activities, as well as “conservation education” and “timber sales,” are significantly ( $p < 0.01$ ) more likely to have taken place on larger properties than on smaller properties.

Respondents were also asked how likely they would be to use professional help in conducting each of the management activities (Figure 16). Presumably, those activities requiring professional assistance would be activities for which a forestry cooperative could be most helpful, either by providing the service, or by enabling landowners to obtain such services at lower cost. The likelihood that professional assistance would be sought was also measured by a four-point Likert scale, ranging from 1 (not likely) to 4 (very likely). Respondents were most likely to seek professional assistance for “controlling insects and diseases” (3.5). Additionally, respondents were somewhat likely to seek professional assistance for “timber stand improvement” (2.9), “writing a forest management plan” (2.8), “forest regeneration” (2.7), and “timber sales” (2.7). Respondents were less likely to seek professional assistance for “wildlife habitat management” (2.5), “deer management” (2.5), and “conservation education” (2.4). Respondents were unlikely to seek professional assistance in “extracting non-timber products” (1.9), “developing recreational uses” (1.8), and “leasing their land for hunting” (1.3).

The questions regarding management activities suggest that controlling insects and disease is very important to landowners and they are likely to seek professional assistance for this activity; however, they are only moderately likely to conduct this activity. Similarly, forest regeneration is important to landowners and they are likely to seek professional assistance for this activity, but they are somewhat less likely to do it than other activities. On the other hand, timber stand improvement is also relatively important to forest landowners; furthermore, they are relatively likely to do timber stand improvement and to seek professional assistance with this activity. While the respondents did not indicate that timber sales were particularly important to them, they are relatively likely to conduct timber sales and they are relatively likely to seek professional assistance for this activity. These results suggest that it would be particularly useful for a cooperative to provide professional assistance with timber stand improvement and timber sales. Controlling insects and diseases and assisting with forest regeneration are also potentially useful services that a cooperative could provide, but landowners are somewhat less likely to actually conduct these activities on their land.

The survey results also suggest that other services would be considerably less useful. For example, while landowners are likely to extract non-timber products and to develop the recreational use of their forestland, these activities were not considered important and landowners were unlikely to seek professional assistance with these activities. Landowners were decidedly not interested in leasing their land for hunting. A relatively small number of the respondents have leased their land for hunting, interest in this activity seems low, and landowners are probably unlikely to seek professional assistance for this activity. This last result is somewhat surprising since the potential income from hunting leases is significant. Furthermore, based on focus group discussions and other conversations with landowners, the most common objection landowners express toward hunting leases is the “hassle” of monitoring the activities and impacts of the hunters. This hassle can be reduced or eliminated by hiring a professional to deal with the lessees. Most likely there are other, perhaps cultural, biases against hunting leases that also factor into these attitudes. One barrier to leasing land for hunting is tract size. In our sample, owners of larger tracts of timberland were significantly ( $p < 0.001$ ) more likely to have leased their land for hunting than owners of smaller tracts. A cooperative might allow landowners to pool several small tracts into a larger lease that would be easier to monitor and more attractive to hunting groups.

Two of the key objectives in administering the survey were to assess interest in a cooperative and in forest certification. The second and third sections of the survey were designed to address these questions. Both sections began with very brief informational statements. A forestry cooperative was defined as “a voluntary, legal organization of people that have a mutual interest, usually economic, to provide themselves a service that they need.” Forest certification was described as “a guarantee from an independent entity that forestry practices are carried out responsibly, based on a set of already agreed-upon forest management standards.”

Following the brief definition of a forestry cooperative, the survey asked respondents whether they already belong to a cooperative or a forest landowners’ association and, if so, which organizations. Most respondents (79%) did not already belong to a cooperative or landowner association (Figure 17). Of the 57 respondents (17%) who indicated that they belong to a cooperative or landowner association, 22 indicated that they were members of the Farm Bureau and 12 indicated that they are members of a farming cooperative. Relatively few, seven and fourteen, respectively, indicated that they are members of the two largest landowners associations in the area, the Woodland Owners of the Southern Alleghenies and the Town Creek Watershed Association. Ten indicated that they are members of the Maryland Forestry Association and four indicated that they are members of the Pennsylvania Forestry Association. Six indicated that they participate in the Tree Farm program. The primary benefits these respondents indicated that they receive from belonging to these organizations are information and education (48 of 57 respondents), technical expertise (19/57), opportunities to socialize (15/57), and sharing costs (10/57).

The survey asked respondents to indicate their interest in joining a forestry cooperative. Fourteen respondents (4%) were “very interested” and seventeen respondents (5%) were “interested” (Figure 18). While these are relatively small percentages, there clearly are at least thirty-one forest landowners in the region who are interested in joining a forest landowners’ cooperative. Furthermore, 131 respondents (38%) indicated that they were “somewhat interested” in joining a cooperative, but they would need more information before joining. If half of these actually joined together with the thirty-one landowners who were either interested or very interested in joining a cooperative, this would result in nearly one hundred members – more than enough to form a viable cooperative. Forty percent of respondents were either “not interested” or “definitely not interested” in joining a forest landowners’ cooperative.

Several factors are related to whether a landowner is interested in joining a forest cooperative. Landowners who already belong to a cooperative or a landowners’ association are significantly ( $p < 0.001$ ) more likely to be interested in joining a cooperative. Additionally, those who have acquired their land since 1980 were significantly ( $p < 0.05$ ) more likely to be interested in joining a cooperative. The amount of forestland owned was not related to the landowner’s level of interest in joining a cooperative. A more comprehensive statistical analysis of the factors related to interest in joining a cooperative will be conducted, but was not available at the writing of this report.

Respondents were also asked to indicate the amount they would be willing to invest as a one-time capital investment in the forest landowners’ cooperative, assuming “there was a low probability of loss and high potential for returns on investment.” Only the responses of those landowners who indicated that they were at least “somewhat interested” in joining a local forestry cooperative were considered in analyzing this question. Not surprisingly, most (53%) were not sure how much they would be willing to invest (Figure 20). However, many (16%) were willing to invest between 50 cents and a dollar for each acre of forestland that they owned, and a quarter (25%) were willing to invest more than \$1 per acre. We also asked how much respondents would be willing to pay in annual dues to the cooperative. Again, the

majority (51%) were not sure (Figure 21). Most of the remaining respondents were relatively equally split between three choices 1) less than 50 cents per acre (13%), 2) 50 cents to a dollar per acre (19%), and 3) more than a dollar per acre (12%). Only four percent indicated that they would not be willing to pay anything for annual dues.

The next section of the survey instrument asked respondents about their knowledge of forest certification, their interest in certifying their forestland, and the benefits they think they might receive from certifying their forestland. The majority (57%) indicated that they knew nothing at all about forest certification before participating in the survey (Figure 22). About one in five (19%) indicated that they knew “a little,” and about one in five indicated that they knew “some” (14%) or “a lot” (6%) about forest certification prior to participating in the survey. Given their lack of information about forest certification, it is not surprising that half (50%) of the respondents indicated that they were “not sure” whether they would be interested in certifying their forestland or not (Figure 23). A third (33%) indicated that they had “no intention” of certifying their forestland. Surprisingly, eight percent of the respondents indicated that they “already have” certified their forestland. This number is much higher than we expected, and it is possible that many of these respondents were either unclear about what certification entailed or that they had a much broader definition than we had about what it means to be certified. For example, landowners who are part of the Tree Farm program may consider their forestland certified. Three percent of the survey respondents indicated that they currently do not have their forestland certified, but that they “intend to.” Additional statistical analysis of the survey results will be conducted to determine whether any characteristics of landowners are more likely to be associated with interest in certifying their forestland.

Survey respondents were also asked what benefits they believe they might receive by certifying their forestland. Their responses are shown in Figure 24, broken out by their level of interest in certifying their forest property. The most common response was “not sure,” but most of these respondents were also those who had indicated that they were “not sure” or “not interested” in certifying their forestland. Of those who indicated that they already have certified their forestland or that they intend to, the most important benefit that they anticipated was the “knowledge that their property was well-managed.” “Better timber prices” and “access to markets” were either less important to these respondents, or they did not expect that certification would result in these benefits.

**Informational Meeting.** An informational meeting was held on Tuesday, October 23, 2001, at the American Legion Hall in Bedford, PA. Invitations were mailed out with survey results – in the form of a reprint of the survey that included response frequencies (similar to the one in Appendix A) – to all respondents who indicated that they were interested in receiving information about the results of the study. Invitations were also mailed to all members of the Woodland Owners of the Southern Alleghenies. (We were unable to obtain the mailing list for the Town Creek Watershed Association.) Additionally, ads were placed in the *Bedford Gazette*, the *Altoona Mirror* and the *Cumberland Times* inviting anyone interested to attend. Pizza and soda were provided as an incentive to attend.

About 40 people attended the informational meeting. Mike Jacobson gave a PowerPoint presentation on background information regarding forestry cooperatives – what they are, how they are organized, potential benefits of cooperation, and examples of forestry cooperatives – and forest certification. Marc McDill gave a PowerPoint presentation on the results from the landowner survey. The presentation was followed by a lively discussion of how a forestry cooperative might be organized in the study area, but no consensus was reached. Much of the discussion focused on the business model that the potential cooperative would take – i.e., whether the cooperative would be a service-oriented cooperative,

offering help with insect and disease treatments, timber sales, and management planning, or whether the cooperative would invest in sawmilling equipment and possibly lumber drying equipment. At the close of the meeting, individuals interested in discussing and planning for a forestry cooperative were asked to sign up to participate in a planning committee. Eleven individuals signed up. A meeting of this group was held in the spring of 2002, and another meeting was held on Wednesday, June 19, 2002. Additional meetings are planned to further refine the vision of how the cooperative will be organized and to begin to develop a formal list of landowners who are committed to participating in the cooperative.

## DISCUSSION AND SUMMARY

**The Survey.** Overall, the survey results paint a picture of a very diverse population of forestland owners in the study region:

- the size of their properties ranges from less than 10 to more than 500 acres;
- about a quarter (25%) have owned their properties since before 1970, while 31 percent have only acquired their properties recently (since 1990);
- landowners' educational levels range from less than high school (6%) to graduate or professional school (18%);
- household incomes range from less than \$20,000 (9%) to more than \$100,000 (14%); and
- only 9% were farmers.

Reasons for owning forestland are similarly diverse. Each of the twelve reasons for owning forestland listed in the survey was "most important" to at least some of the respondents. The most commonly-held reasons for owning the land were "to preserve natural beauty and wildlife," "to live in a rural area," "personal residence," and "to pass on to heirs." Economic values such as "growing timber and other forest products" and "land investments other than farming or timber" were generally among the least important reasons for owning forestland. Also, few indicated that the land was important as a location for a hunting camp. Landowners' most significant concerns were "water quality," "insects and diseases," "taxes," and forest regeneration.

"Controlling insects and diseases," "forest regeneration" and "timber stand improvement" were the management activities that respondents rated as most important. They were also likely to seek professional assistance with these activities. These are activities that a forestry cooperative could potentially assist landowners with. While the respondents did not generally consider "timber sales" to be important, it is the activity they have been second-most likely to have carried out in the past – after "extracting non-timber forest products" – and respondents were relatively likely to seek professional help with timber sales. Thus, providing professional assistance with timber sales would also be a useful service that a forestry cooperative might provide. While leasing their land for hunting has the potential to generate significant revenue for forest landowners, respondents were decidedly not interested in this activity.

While a relatively small percentage of respondents (9%) expressed interest in joining a forestry cooperative, this still represents a potential core group of 30 or so individuals, enough to form a small cooperative. Furthermore, there is also a significant group of other landowners that might be interested in a cooperative if they were provided with more concrete information about how it would work and what benefits it might offer to them. Of those at least somewhat interested in joining a forestry cooperative, support seems to exist for initial capital investments on the order of \$1 per acre and annual dues in the range of \$0.50 - \$1 per acre. Of course, there also is a large group of landowners that are unlikely to be interested in participating in a cooperative.



Most of the landowners who were surveyed (57%) knew “nothing at all” about forest certification before receiving the survey. However, about 1 in 5 knew “some” or “a lot” about certification. Eight percent indicated that their land is already certified, and an additional 3% indicated that they “intend to” certify their forestland. A third indicated that they had “no intention” of certifying their land, but most (51%) indicated that they were “not sure” whether they would certify their land or not. By far, the most important reason cited by landowners for becoming certified was “knowledge that [their] land was properly managed.” “Better prices for your timber” and “access to markets” were considerably less important to the landowners.

**The Future of a Cooperative.** A basic question asked in this study was: what is the potential for a forestry cooperative in the study area? The answer to this question seems to be that the potential is there. Two active landowner associations already exist in the area, and there is a core group of at least 30 people who are interested in forming a cooperative. Over a hundred survey respondents indicated that they were potentially interested in a cooperative, but that they need more information. At least 40 people were interested enough to come to the informational meeting that was organized as the final activity for this project. Eleven individuals volunteered to continue the discussion as an informal steering committee for the potential cooperative.

Nevertheless, momentum for forming a cooperative is gradually developing. While the focus groups and the survey have provided a considerable amount of useful information about the potential for a forestry cooperative in the region, they – especially the survey – are less useful for identifying the reasons for the lack of progress. Probably the most significant barrier is the lack of a clear, shared vision among those interested in forming a cooperative regarding the basic functions that the cooperative would serve. While there undoubtedly are many different visions, two basic models seem to define the range of possible cooperative structures. Under the first model, the cooperative would provide services, such as assistance with timber sales, timber stand improvement activities, purchasing supplies and materials, management planning, and insect and disease treatments. Under this model, the cooperative would be able to provide these services at reduced cost by taking advantage of the possibilities to coordinate among members to save costs or to obtain services at lower costs through economies of scale and increased purchasing power. A problem with this model is that many do not see these services as being sufficiently different from what is already available, raising the question of whether a cooperative is needed at all.

Under the alternative model the forestry cooperative would invest in or obtain access to sawing and possibly drying and milling equipment. This is the model that has been emphasized by the Cooperative Development Services of Madison, WI, the University of Wisconsin Center for Cooperatives, also of Madison, WI, and the Community Forestry Resource Center, Minneapolis, MN (see Nadeau et al. 2000). Jim Birkmeier, the forestry cooperative organizer from Wisconsin who spoke to one of our focus groups, is also a strong proponent of this model (see <http://www.timbergreenforestry.com>). This model has the potential to provide significantly greater revenues for forestland owners by capturing greater value-added from the timber that they produce. The model also has the disadvantage of requiring more initial capital and involving greater risk of failure.

Intermediate models involve contracting with existing sawmills, kiln-drying operations, and mill-work businesses for services rather than investing in equipment. As business increases, the cooperative could decide to purchase equipment at a later date. Many key business issues will need to be addressed. How many landowners, and with how much land, will be willing to sign up for the cooperative from the start? How much of an initial investment will the initial group of cooperators need to make? What kind

of annual dues structure should be imposed? What kind of governance structure would work best? Will a business manager be needed, or can the cooperative operate solely on volunteer labor? What outside resources – e.g., grants, loans, information – can be obtained to help establish the cooperative? Who will write the initial business plan? What kind of time schedule is realistic for getting the cooperative up and running?

Regardless of the model, further progress will depend critically on whether a leadership group emerges that has the energy, vision, and the confidence of enough people to move the cooperative from the concept and discussion stage to reality. Many of the individuals who have provided leadership to the landowner groups that already exist have indicated that they are somewhat “burned out” and would prefer to pass the leadership torch to some new people. Whether these people will come forward and can be effective is yet to be determined.

**Certification.** The majority of landowners have not heard about forest certification. Thus, most of the survey respondents were unsure about whether they were interested in certifying their forest property. Even among those who knew something about certification, only about one in five (22%) expressed an interest in certifying their forest land. Among all respondents, only one in ten expressed strong interest in certification. Respondents did not consider higher prices or access to markets important potential benefits of certification. Those who were interested in certification indicated that the main benefit they expect to receive from certification was simply to know that their land was well managed. While this benefit can be of significant value, it is not sufficient to make certification a high priority for most landowners. Members of the steering committee planning for the cooperative seem more concerned with getting the cooperative up and running and profitable. Certification is not perceived as contributing significantly to helping the cooperative become profitable. While most are interested in certification for the cooperative at some point, it appears to be a low priority at this time.

**Next Steps.** The priority at this time for the landowners is to continue to hold meetings to increase the number of people who are committed to the concept of a cooperative and to further refine the vision of the business plan the cooperative. These meetings will be promoted through ads and, potentially, articles in the local newspapers, and through the newsletters of landowners’ associations, such as the Woodland Owners of the Southern Alleghenies and the Town Creek Watershed Association. Provided that a sufficient amount of interest can be stimulated, attendees will work out the plan for how the cooperative will be organized. If all goes well, the steering committee will develop a formal business plan and a plan for establishing and expanding the cooperative over time. Additional assistance, in the form of information, grants and loans, will be sought from government agencies and other cooperatives.

Additional research will also be conducted by the principal investigators of this project. We plan to provide assistance to the steering committee in whatever capacity they believe we can help with. In particular, we will help the steering committee identify and contact government agencies that can provide assistance, and we can review products such as the cooperative vision and mission statements, the business plan, and grant proposals. We also plan to do additional statistical analyses of the data set resulting from the survey. We intend to publish at least one peer-reviewed journal article based on this research.

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**APPENDIX A. Certification/Cooperative Survey Instrument**

# **Assessing Forest Landowner Attitudes in Pennsylvania and Maryland**



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## **Survey Results**

**PART 1. THIS PART ASKS QUESTIONS ABOUT YOUR FORESTLAND.**

**1. How many acres of forestland do you own? (check one)**

3% 1 - 9 acres  
34% 10 - 49 acres  
26% 50 - 99 acres  
34% 100 - 499 acres  
2% 500 or more acres     1% missing

**IF YOU DO NOT OWN ANY FORESTLAND, PLEASE CHECK THE BOX BELOW AND MAIL THE SURVEY BACK IN THE ENCLOSED POSTAGE PAID ENVELOPE. THANK YOU FOR YOUR TIME. OTHERWISE, CONTINUE WITH QUESTION 2.**

I DO NOT OWN ANY FORESTLAND

**2. What percent of your land is forested? (check one)**

7% 1 - 19 percent  
10% 20 - 39 percent  
19% 40 - 59 percent  
28% 60 - 79 percent  
30% 80 - 100 percent     6% missing

**3. In which of the following counties is your forestland located? (check all that apply)**

204 Bedford (Pennsylvania)  
0 Fulton (Pennsylvania)  
143 Allegany (Maryland)  
11 Other (please specify): Somerset, PA (3), Washington (2), Garrett(2), Howard, Frederick.

**4. When did you acquire the majority of your forestland? (check one)**

25% Before 1970  
16% 1970 - 1979  
27% 1980 - 1989  
30% 1990 - 1999  
1% 2000 or after     1 obs missing (percentages do not sum to 100% due to rounding)

**5. How did you acquire the majority of your forestland? (check all that apply)**

275 Purchase     4 missing  
64 Inheritance  
25 Gift  
2 Other (please specify): family, deed transfer



**9. As a forest landowner, how concerned are you about each of the following issues?**  
*(circle only one number for each row)*

Issue	Not concerned	2	3	Very concerned	No opinion
A. Lack of forest management information .....	1 (61)	2 (76)	3 (77)	4 (68)	9 (25)
B. Poor timber harvesting practices .....	1 (35)	2 (52)	3 (70)	4 (131)	9 (22)
C. Non-native species .....	1 (60)	2 (65)	3 (57)	4 (69)	9 (51)
D. Insects and diseases .....	1 (9)	2 (26)	3 (70)	4 (202)	9 (9)
E. Water quality .....	1 (11)	2 (18)	3 (58)	4 (214)	9 (10)
F. High deer population .....	1 (38)	2 (45)	3 (73)	4 (152)	9 (10)
G. Land being parceled off into smaller tracts ...	1 (54)	2 (38)	3 (65)	4 (119)	9 (36)
H. Taxes .....	1 (17)	2 (36)	3 (65)	4 (195)	9 (4)
I. Forest regeneration .....	1 (13)	2 (27)	3 (93)	4 (164)	9 (14)
J. Lack of government cost sharing programs ...	1 (59)	2 (49)	3 (60)	4 (68)	9 (49)
Other <i>(please specify)</i> : _____					

**10. How important are each of these activities on your land?**  
*(circle only one number for each row)*


Activity	Not important	2	3	Very important	Do not know
A. Forest regeneration .....	1 (27)	2 (40)	3 (90)	4 (150)	9 (11)
B. Timber stand improvement .....	1 (25)	2 (39)	3 (92)	4 (140)	9 (17)
C. Controlling insects and diseases (e.g., gypsy moth) .....	1 (13)	2 (20)	3 (63)	4 (222)	9 (3)
D. Writing a forest management plan .....	1 (85)	2 (69)	3 (68)	4 (54)	9 (32)
E. Developing recreational uses (e.g., trails) ....	1 (115)	2 (61)	3 (67)	4 (52)	9 (17)
F. Timber sales .....	1 (112)	2 (72)	3 (65)	4 (48)	9 (18)
G. Deer management .....	1 (49)	2 (42)	3 (68)	4 (148)	9 (11)
H. Wildlife habitat management .....	1 (35)	2 (40)	3 (83)	4 (142)	9 (14)
I. Leasing land for hunting .....	1 (225)	2 (27)	3 (18)	4 (10)	9 (31)
J. Extracting non-timber products (e.g., firewood, mushrooms) .....	1 (104)	2 (69)	3 (69)	4 (60)	9 (15)
K. Conservation education .....	1 (61)	2 (56)	3 (74)	4 (73)	9 (24)
Other <i>(please specify)</i> : _____					



**11. When was the last time you did any of the following activities?**  
*(circle only one number for each row)*

Activity	Within the last 10 years	More than 10 years ago	Never
A. Forest regeneration .....	1 (94)	2 (41)	3 (172)
B. Timber stand improvement .....	1 (113)	2 (47)	3 (152)
C. Controlling insects and diseases (e.g., gypsy moth) .....	1 (114)	2 (36)	3 (165)
D. Writing a forest management plan .....	1 (62)	2 (28)	3 (220)
E. Developing recreational uses (e.g., trails) ....	1 (119)	2 (24)	3 (163)
F. Timber sales .....	1 (114)	2 (65)	3 (144)
G. Deer management .....	1 (100)	2 (9)	3 (198)
H. Wildlife habitat management .....	1 (114)	2 (11)	3 (182)
I. Leasing land for hunting .....	1 (23)	2 (2)	3 (284)
J. Extracting non-timber products (e.g., firewood, mushrooms) .....	1 (188)	2 (13)	3 (117)
K. Conservation education .....	1 (62)	2 (23)	3 (205)
Other <i>(please specify)</i> : _____			

**12. If you were to do any of these activities in the future, how likely would you be to use professional assistance? (circle only one number for each row)**

Activity	Not likely		Very likely	Do not know	
A. Forest regeneration .....	1 (79)	2 (27)	3 (41)	4 (118)	9 (48)
B. Timber stand improvement .....	1 (69)	2 (33)	3 (40)	4 (136)	9 (39)
C. Controlling insects and diseases (e.g., gypsy moth) .....	1 (27)	2 (15)	3 (42)	4 (215)	9 (23)
D. Writing a forest management plan .....	1 (76)	2 (26)	3 (40)	4 (116)	9 (52)
E. Developing recreational uses (e.g., trails) ....	1 (159)	2 (44)	3 (25)	4 (45)	9 (39)
F. Timber sales .....	1 (88)	2 (33)	3 (44)	4 (123)	9 (29)
G. Deer management .....	1 (100)	2 (39)	3 (39)	4 (100)	9 (38)
H. Wildlife habitat management .....	1 (91)	2 (49)	3 (40)	4 (99)	9 (35)
I. Leasing land for hunting .....	1 (222)	2 (18)	3 (6)	4 (21)	9 (45)
J. Extracting non-timber products (e.g., firewood, mushrooms) .....	1 (163)	2 (45)	3 (22)	4 (57)	9 (29)
K. Conservation education .....	1 (91)	2 (47)	3 (39)	4 (65)	9 (40)
Other <i>(please specify)</i> : _____					

**PART 2. THIS PART ASKS QUESTIONS ABOUT FORESTRY COOPERATIVES.**

A FORESTRY COOPERATIVE IS A VOLUNTARY, LEGAL ORGANIZATION OF PEOPLE THAT HAVE A MUTUAL INTEREST, USUALLY ECONOMIC, TO PROVIDE THEMSELVES A SERVICE THAT THEY NEED.

**13a. Do you belong to any cooperatives or landowner associations? (check one)**

57 YES                      NO 275                      *13 missing*

**IF YOU ANSWERED NO TO QUESTION 13a, PLEASE GO DIRECTLY TO QUESTION 14 AT THE BOTTOM OF THIS PAGE. OTHERWISE, PLEASE CONTINUE WITH QUESTION 13b.**

**13b. If yes, please indicate which associations or cooperatives you belong to. (check all that apply)**

7 Woodland Owners of the Southern Alleghenies  
14 Town Creek Watershed Association  
4 Pennsylvania Forestry Association  
10 Maryland Forestry Association  
3 American Forests Association  
2 National Woodland Owners Association  
1 Forest Landowners Association  
22 Farm Bureau  
12 A farming cooperative (please specify): Bedford Co. Soil Cons., Land o' Lakes, Southern States  
9 Other (please specify): Tree Farm (6), Westvaco (2), MD Forest Stewardship Program

**13c. What benefits do those associations or cooperatives provide you? (check all that apply)**

48 Information/education  
15 Opportunities to socialize  
19 Technical expertise: (please specify): assist w/timbering permit, what timber to cut, newsletter  
3 Marketing products (please specify): milk  
10 Share costs (please specify): supplies, equipment, tree tubes  
4 Share work (please specify): paint trees for management  
3 Other (please specify): liability insurance for lease, monitor quality of creeks, keep govt. away

**14. How interested are you in joining a forestry cooperative in the area? (check one)**

4% Very interested  
5% Interested  
38% Somewhat interested, but I need more information  
32% Not interested  
8% Definitely not interested  
7% Not sure (please specify): I don't know what it is; I work with the state foresters.  
6% missing

**15. If a forestry cooperative were established in your area, what would be the maximum one-time capital investment you would be willing to make per acre in a forestry cooperative if there was a low probability of loss and high potential for returns on investment? (check one)**

- 21% None                      5% missing
- 3% Less than \$0.50
- 11% \$0.50 to \$1
- 14% More than \$1
- 46% Not sure

**16. If a forestry cooperative were established in your area, what would be the maximum amount you would be willing to pay per acre per year in membership dues to belong to the cooperative? (check one)**

- 24% None                      6% missing
- 8% Less than \$0.50
- 11% \$0.50 to \$1
- 7% More than \$1
- 44% Not sure

**PART 3. THIS PART ASKS QUESTIONS ABOUT YOUR KNOWLEDGE AND INTEREST IN FOREST CERTIFICATION.**

FOREST CERTIFICATION IS A GUARANTEE FROM AN INDEPENDENT ENTITY THAT FORESTRY PRACTICES ARE CARRIED OUT RESPONSIBLY, BASED ON A SET OF ALREADY AGREED-UPON FOREST MANAGEMENT STANDARDS.

**17. Prior to reading this survey, how much did you know about forest certification? (check one)**

- 57% Nothing at all              4% missing
- 19% A little
- 14% Some
- 6% A lot

**18. What are some of the benefits you believe you can receive from certifying your forest? (check all that apply)**

- 73 None                      24 missing
- 30 Access to markets
- 42 Better prices for your timber
- 114 Knowledge that your property is properly managed
- 127 Not sure
- 6 Other (please specify): Assistance in any timber sales; To maintain and continue a wooded area

**19. Are you interested in certifying your forest? (check one)**

- 8% Already have              6% missing
- 3% Intend to
- 33% No intention
- 50% Not sure

**PART 4. THIS PART OF THE SURVEY ASKS PERSONAL QUESTIONS ABOUT YOU FOR ANALYTICAL PURPOSES. YOUR RESPONSES ARE STRICTLY CONFIDENTIAL. IF YOU CHOOSE NOT TO ANSWER ANY ONE QUESTION, PLEASE GO TO THE NEXT.**

**20. What is your age?** 29 to 92; avg=59 years old 26 missing

**21. What is your gender? (check one)**

79% Male Female 15% 6% missing

**22. Are you retired? (check one)**

44% YES NO 49% 7% missing

**23. What is/was your primary occupation?** 47% blue collar, 32% professional, 9% farmer

**24. What is the highest level of education you have completed? (check one)**

6% Less than high school 6% missing

34% High school

7% Associates degree/technical school

15% Some college

14% College

18% Graduate or professional school

**25. What is your best estimate of your total household income from all sources during the past 12 months? (check one)**

9% Less than \$20,000 29% missing

18% \$20,000 to \$39,999

13% \$40,000 to \$59,999

13% \$60,000 to \$79,999

4% \$80,000 to \$99,999

14% \$100,000 or more

**26. Over the last ten years, how much total income (before taxes) have you earned from your forestland? (check one)**

57% None 16% missing

5% \$1 to \$999

13% \$1,000 to \$9,999

7% \$10,000 to \$49,999

1% \$50,000 to \$99,999

1% \$100,000 to \$199,999

0% \$200,000 or more

*If you wish to make any additional comments, please write them here.*

***Thank you for completing the survey.***

*If you would like a copy of the survey results, please check this box.* ●

*Thank you for your time and effort spent filling out this survey. Your comments will be extremely helpful in our assessment of forest landowner knowledge and attitudes in Pennsylvania and Maryland.*