

Forest Stewardship

Our Link to the Past— Our Legacy for the Future

Forest stewardship is the wise management and use of our forest resources to ensure their health and productivity for years to come. Stewardship challenges us to look beyond our immediate personal needs so we can leave a living forest legacy for future generations.

Nearly three-quarters of Pennsylvania's seventeen million forested acres is in the hands of private forest landowners. Pennsylvania has an unusually abundant and high-quality hardwood resource—one of the best in the world. With the demand for our timber growing, private landowners face increasing pressure to harvest trees. We can meet the demand for Pennsylvania timber and sustain our forests for the future through well-planned harvests that consider all forest values. The need in our state for forest stewardship—wise management and use—is pressing.

We know from research conducted in the early 1990s that forest landowners overwhelmingly want to do the right thing when it comes to taking care of their land. We also know that landowners consider a lack of knowledge and information to be their major stumbling block in that effort. Uninformed landowners unwittingly can degrade their land through well-intentioned management decisions and activities. For landowners who want to avoid costly or resource-damaging mistakes in their forests and want to learn how to be better stewards of their land, Pennsylvania offers the Forest Stewardship Program.



What Is the Forest Stewardship Program?

The Forest Stewardship Program was first authorized under the Forestry Title of the 1990 Farm Bill. The U.S. Department of Agriculture Forest Service administers the program nationally, and the Pennsylvania Department of Conservation and Natural Resources Bureau of Forestry directs the program with guidance from a statewide steering committee.

The Forest Stewardship Program does not tell you what you should do on your own land. Instead, it helps you accomplish, in the best way possible, what *you* want to do, whether or not that includes timber harvesting. The goal is to sustain healthy and productive forests for people and for wildlife.

The program includes a written management plan for your forest land—a forest stewardship plan—and provides cost-share money to help you pay for that plan (see “Getting Cost-Share Assistance for Your Forest Stewardship Plan” on pages 4–5). Financial assistance is available from several sources to help you pay for certain management activities. The Bureau of Forestry service forester assigned to your county will give you all the details you need to get started.



WHY WE NEED STEWARDSHIP: A BRIEF HISTORY OF PENNSYLVANIA'S FORESTS

Pennsylvania was aptly named for the seemingly endless stretches of forest that covered the state in William Penn's day. White pine, hemlock, and a variety of deciduous (hardwood) species abounded. But for early colonists, the forests were more of a nuisance than a resource. Colonists' survival depended on their ability to replace the forest with farm fields. That marked the beginning of what would become the widespread and reckless exploitation of Penn's Woods.

The British navy quickly recognized the value of the massive white pine timbers for shipbuilding and claimed many of the best for the mother country. Later, as the new nation grew, logs were floated down every possible river and stream to be sawn in mill towns. Huge rafts of Pennsylvania logs were floated to cities as far away as New Orleans. The early iron industry consumed endless acres of hardwoods to make charcoal to fuel its furnaces. Railroads improved transportation options and encouraged further harvesting. In the late 1800s, narrow-gauge logging railroads made it possible to harvest timber from mountainous areas miles away from waterways. The tanning and wood chemical industries emerged to use even the smallest, lowest-grade material that could be transported.

By the early 1900s, Pennsylvania largely had been cleared of its majestic forests. Repeated forest fires and soil erosion slowed the forests' recovery. On top of that, within another twenty years, chestnut blight entered the state and rapidly eliminated the American chestnut—one of the most environmentally and economically valuable trees ever to grow in Pennsylvania forests. Because of nature's resilience, and in part because of the farsighted efforts of early conservationists and natural resources professionals, Pennsylvania's forests rebounded, although without American chestnut as part of the species mix. Today, our forests are generally healthy and growing and in their best condition of the last 150 years.

Our forests are not without problems, however. The lack of forest regeneration—particularly of some oak species—and a decrease in native biodiversity, caused in part by high populations of white-tailed deer, are significant concerns. The introduction, intentional and otherwise, of certain invasive, exotic plants such as multiflora rose and some honeysuckles also threatens the existence of numerous native plant species. Outbreaks of exotic pests such as the gypsy moth and a host of native defoliators continue to stress the forests. Wildfire remains a serious threat in the wildland/urban interface.

Private forest landowners, who control most of the woodland resource, seldom seek the help of resource management professionals despite increased interest in timber harvesting. Good forestry is so much more than cutting big trees. Good forestry requires concern for and understanding of the effects of our decisions and actions on the well-being of the entire forest ecosystem. We can avoid serious degradation of the forest when knowledgeable landowners and natural resources professionals plan and work together.

To meet the ever-increasing demand on Pennsylvania's forest resources, we must manage our forests to keep them healthy and productive for the long term—an idea known as forest sustainability. Our past exploitation now necessitates our benevolent management. We cannot again treat our woodlands with disregard and count on Mother Nature to restore one of the world's richest forests a second time.

Forest sustainability is the focus of the Forest Stewardship Program, designed specifically to meet the needs of private forest landowners who care about their land. If you are such a landowner, we hope you will join us in the stewardship of Penn's Woods.

How Does the Forest Stewardship Program Help Me?

The Forest Stewardship Program provides information, education, and technical assistance to encourage, help, and recognize private forest landowners who keep their lands and natural resources productive and healthy. One of the great advantages of becoming a forest steward is that you link into a valuable network of information, knowledge, and assistance, provided through various publications, natural resources professionals, and fellow forest landowners. Only your desire for knowledge will limit what you can learn about sound forest management, regardless of your interests and objectives for your land. The Forest Stewardship Program shows you how and where to find information and assistance.

Anyone interested in the Forest Stewardship Program can receive a quarterly newsletter that provides information on various aspects of forest management, from harvesting timber to building a brush pile for wildlife to learning more about forest wildflowers. The newsletter also informs readers of other useful publications available at little or no cost, including this one and the entire series of Forest Stewardship publications.

Once you begin the Forest Stewardship Program enrollment process, you also will gain knowledge through your working relationships with your county Bureau of Forestry service forester and the natural resources consultant(s) of your choice. Many forest stewards go on to learn much more about forest management when they agree to serve as forest stewardship volunteers through the Pennsylvania Forest Stewards Volunteer Program. Volunteers receive intensive preliminary forest management training and, later, have the opportunity to participate in continuing education workshops.

How Can I Participate in the Forest Stewardship Program?

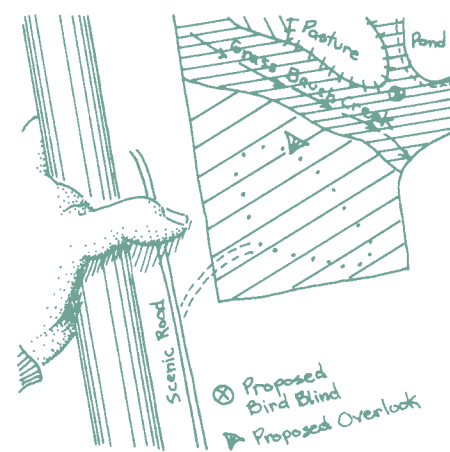
All private forest landowners are welcome in the Forest Stewardship Program; however, to receive a cost-shared stewardship plan, properties must contain at least 5 acres of forestland. Owners of nonforested, open land intended to be managed for water quality, wildlife habitat, or timber production also qualify, as do corporate owners who are not involved in the production of forest products.

The first step is to contact the Bureau of Forestry service forester assigned to your county. (Check the blue pages of your telephone book, under "Government Offices—State," for the Bureau of Forestry office serving your area.) During an on-site visit, your service forester will help you identify your interests in and objectives for your forestland. Your service forester will guide you through the process of developing a forest stewardship plan for your land (hiring a consultant to write your plan, getting your plan approved, applying for cost-share assistance, and so forth), help you get started with the projects you include in your plan, and link you to other sources of assistance and information.

To participate in the Forest Stewardship Program, you must agree to hire and work with a natural resources consultant to develop your forest stewardship plan. To guide you to your goals through sound forest management, begin with an overall inventory of the resources on your land. Knowing what you have on your property and deciding what about your forest is most important to you will form the foundation for everything else you will do on your land.

Developing a Forest Stewardship Plan

The process for developing your forest stewardship plan is simple. Your service forester can talk about it with you in more detail during a site visit to your forest. Additional information is available in Forest Stewardship 6: *Planning Your Forest's Future*. (Your service forester can get you a copy.) In the meantime, here is a brief description of what you and your natural resources consultant will need to do and discuss.



DEFINING OBJECTIVES

The first step involves reviewing your objectives for owning forest land. For example, how do you and your family use the land? What forest activities do you enjoy? What are your long-range hopes for the land? A Bureau of Forestry service forester or a Pennsylvania Forest Stewards volunteer working under the direction of the service forester will meet with you to help with this step. Identifying goals and objectives for your land is not always as easy as it might seem, but it is essential to know what you want from your land before you do anything else. Based on your interests and objectives, the service forester will recommend the type of consultant(s) you should contact to develop a personalized plan for your property.

continued on page 6

GETTING COST-SHARE ASSISTANCE FOR YOUR FOREST STEWARDSHIP PLAN

The cost of a forest stewardship plan depends on how much acreage is involved, the amount of detail you want or need in your plan, and your consultant's fee structure, which is subject to negotiation and agreement between you and the consultant who develops and writes your plan. The Forest Stewardship Program includes funds set aside to help you cover most of the expense of creating a forest stewardship plan. The Pennsylvania Association of Conservation Districts (PACD) handles the cost-share moneys for forest stewardship plans; your Bureau of Forestry service forester will help you apply for them.

The following steps describe the normal flow of events as you pursue a forest stewardship plan supported by cost-share assistance from the Forest Stewardship Program. The goal of the process is to have you end up with a plan that meets your needs; as long as everyone involved generally follows the process outlined here, your cost-share funds will not depend on rigid adherence to every detail. Your consultant and your service forester will help guide you through the process from start to finish.

1. Your local service forester (or Pennsylvania Forest Steward volunteer working under the direction of the service forester) will meet with you, tour your property with you, and discuss your interests and management activities to date.

- 2.** You will receive three items:
- a *questionnaire*, "Developing Management Goals for Your Property"
 - a *directory* of natural resources consultants in your area who are trained to write forest stewardship plans
 - a *form*, "Request to Cost-Share the Development of a Forest Stewardship Plan"

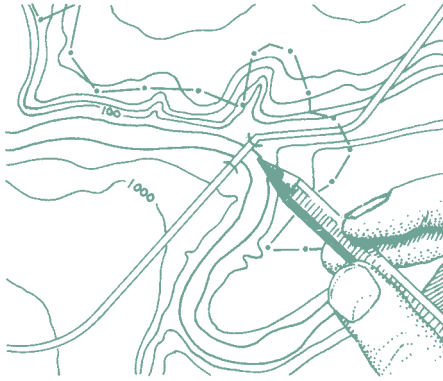
3. Complete the questionnaire, "Developing Management Goals for Your Property." Spend some time on this step—your responses are crucial for determining the future of your forestland. Think about why you own your land, what activities you enjoy there, and what your long-term hopes for your land are. It is a good idea to have each family member fill out a copy of the questionnaire and then discuss your responses at a family meeting before you hire a consultant to write your plan.

4. Review the list of consultants available to write plans. Consider carefully each person's education, experience, and interests. You will want to work with someone with whom you are compatible—someone who understands and appreciates what is important to you and will develop a plan that addresses your wants and needs. Check references. If there is a landowners' association in your area, call some of the members for recommendations. Word of mouth is a good way to find a suitable consultant.

5. Interview several consultants. Review your landowner questionnaire with them. Tell them about any management work you have done in the past and any areas of special interest to you or your family members. Discuss any project ideas you have and ask lots of questions. This is a good way to determine how well you and each consultant, together, can clarify goals to guide the management of your land. You can choose just one consultant, or you can hire several with varying specialties. If your property is larger than 25 acres, we strongly recommend that you involve a forester in developing your plan.

6. After you have selected and hired a consultant to write your forest stewardship plan, let your county service forester know who it is. Your service forester cannot begin the process of applying for cost-share money without this information. We recommend that you have a written agreement with your consultant that includes the price of the finished plan and the expected completion date. (For your benefit and to help keep the process moving, there is a six-month deadline from the date your service forester submits your request for cost-share assistance until the completion of a written, approved management plan.) You also will need to send copies of your completed landowner questionnaire to your service forester and your consultant(s).

7. Your consultant will develop your management plan according to Forest Stewardship Program guidelines. Provide any maps of the property you might have. You also might have to help locate property boundaries.



10. Send a copy of the consultant's bill for writing the plan to your service forester and inform the service forester whether the cost-share payment is to go to you or directly to your plan writer. Your service forester will authorize payment of the amount listed on the "Request to Cost-Share" form and submit the necessary paperwork to the Bureau of Forestry's Harrisburg office.

11. PACD will mail a check for the amount of the authorized cost-share. You or your consultant should receive the check within five weeks of authorization.

8. When the plan is complete, your service forester will review it first to ensure that it addresses your stated interests and abilities and meets program requirements. Then you will review the plan.

9. After you and your service forester accept your consultant's written plan, all of you will sign and date the signature page, and the consultant will provide you and the service forester with copies of the plan. The language of the signature page is standard for all plans. Landowners and plan writers both agree that if timber is to be harvested from the property, it will be done in a way that maintains or improves the quality of the forest. The trees to be harvested are to be selected according to a written prescription developed by a consulting forester from a systematic inventory of the forest, called a "stand analysis." This language will be included on the signature page of your plan, even if you do not plan to harvest timber.

Remember, a forest stewardship plan does not tell you what you must do on your land; it helps you do what you want to do in a way that keeps your land healthy and productive for the future. As you move through the process of developing a management plan for your land, your Bureau of Forestry service forester and your natural resources consultant(s) are there to help you answer questions and make important decisions.



(continued from page 3)

HIRING A NATURAL RESOURCES CONSULTANT

In Pennsylvania, about 200 privately employed natural resources consultants work in cooperation with the Bureau of Forestry to develop and write forest stewardship plans for landowners; your service forester has a directory of those working in your area. These stewardship professionals meet established educational standards and have completed a Bureau of Forestry workshop on the Forest Stewardship Program. They agree to promote stewardship principles and sound forest management practices as they work with you to reach your goals. Most of the consultants trained to write forest stewardship plans are foresters, but other specialists include wildlife managers, fisheries biologists, botanists, forest ecologists, and recreation specialists, among others. You might want to work with more than one person, choosing consultants with varying backgrounds. For properties larger than 25 acres, it is strongly suggested that a forester help develop your plan.

A landowner's relationship with a natural resources consultant can be a long-term one, so choose yours carefully. Make sure your consultant's areas of expertise are compatible with your interests and objectives, and choose someone with whom you will enjoy working. Checking references is always a good idea. Many landowners rely on word-of-mouth to find the right consultant. Whomever you choose, make sure that person understands your interests in and objectives for your property.



HOW DO FORESTS ENRICH OUR LIVES?

We can divide the value that forests have for us into three general categories: *economic*, *environmental*, and *aesthetic*.

Economic Value

Pennsylvania's forest resources are an essential part of our state's economy. More than 100,000 people work in Pennsylvania's \$5.5 billion forest products industry, the fourth largest industry in the state. Each year, Pennsylvania's nearly 1,000 sawmills produce more than one billion feet of hardwood lumber, while the state's three pulp and paper mills produce more than 780,000 tons of paper. No other state has a greater volume of select hardwood species, including white ash, red and white oak, black cherry, and hard maple. Pennsylvania's forest products are in worldwide demand. Forestland in Pennsylvania also provides food and cover for abundant populations of game animals such as white-tailed deer, wild turkey, and ruffed grouse. The state's average annual revenue from hunting licenses totals more than \$40 million. Our state's annual use of fuelwood—well over two million cords—is one of the highest in the nation. Other forest economic values come from recreation, tourism, and specialty products such as maple syrup and medicinal and ornamental plants.

Environmental Value

For every ton of new wood that grows, trees remove about 1.50 tons of carbon dioxide from the air and release 1.07 tons of life-giving oxygen. Pennsylvania's forests are made up of countless plant and animal species, rocks, and minerals. These ever-changing biological communities are continuously influenced by natural forces such as wind, rain, and sunshine. The complex and remarkable ways these organisms and natural forces work together indirectly provide us with many environmental values. Forests protect fragile soils from erosion, protect and purify more than 25,000 miles of streams, and improve air quality. More than ninety tree species and about two-thirds of our native wild plants grow in the forest. Our forests' biological diversity represents a treasure chest of cultural, medicinal, and environmental resources that we are only just beginning to discover. Forests serve as indicators of our planet's health, and they contribute to the solutions of a number of potentially serious environmental problems, including global warming.

Aesthetic Value

Forests also provide us with less-tangible benefits such as natural beauty and peace of mind. Think about how forests enrich our lives with wondrous displays of golds, reds, and yellows splashed across the hills each fall; with snow-laden branches glistening after a winter storm; and with fragrant blossoms and birdsongs each spring. A forest is a wonderful place to go hiking, camping, hunting, or bird-watching. Sometimes it is simply a good place to go for a walk and collect our thoughts.

Whether your primary interest in forest resources is economic, environmental, or aesthetic, you should recognize that in some way each of these aspects enhances your life. If you accept the challenge to be a better steward of our forests, you will help ensure that our forests continue to provide these benefits for future generations.

GATHERING INFORMATION

A key component of a forest stewardship plan is a map of the property identifying management units and the acreage in each unit. To develop the map, the consultant uses aerial maps, topographic maps, and any survey or tax maps you can provide. Walking the property, or a “ground reconnaissance,” also is an important part of developing the map for your plan. You might need to help your consultant identify boundaries. The final property map should show management units and acreages, streams, roads, trails, species of concern, and any other features of note.

A **management unit** is an area of your land that will receive the same treatment. For example, an area of mostly pine trees would not receive the same types of management activities as an area of deciduous trees; therefore, they each would constitute a separate management unit. A stream corridor might be another management unit. Each unit is inventoried and described in the forest stewardship plan. Your consultant will gather quantitative and qualitative information about the various resources in the unit such as soils, water, timber, wildlife, recreational opportunities, and aesthetics. The inventories and narrative descriptions of the management units on your property become part of your forest stewardship plan.

MAKING MANAGEMENT RECOMMENDATIONS

Management recommendations become part of your forest stewardship plan only after your consultant has a good understanding of your interests, abilities, and needs and has conducted a thorough inventory of your property. **Management recommendations** are the tools you and your consultant will use to realize your goals and objectives for your forestland; therefore, they should state clearly what to do and why. They might include activities such as thinning an area of woodland to grow better timber, removing old drainage tile to restore a wetland, planting trees and shrubs to protect a stream corridor, or clearcutting an area to create young forest habitat.

There are many possible management recommendations; the ones you and your consultant will include in your plan depend on what you want to do with your land. You and your consultant will highlight the management recommendations in a ten-year schedule of activity, which both of you will use as a convenient reference. The schedule helps you prioritize what you want or need to do on your land.

At this stage, the consultant submits your forest stewardship plan to your Bureau of Forestry service forester for review. The service forester reviews the plan for completeness, attention to your needs and interests as the landowner, and compliance with the minimum requirements established by the Bureau of Forestry. Once the service

forester OKs your plan, it comes back to you for your approval. After you accept the plan, you, your consultant, and your service forester all sign it. Now you are a forest steward. You receive a large metal “Stewardship Forest” sign to post at the entrance of your property, identifying it as a responsibly managed forest.

IMPLEMENTING YOUR PLAN

After you have an approved, signed forest stewardship plan, your service forester is available to help you carry out the recommended and scheduled activities. Remember, if you are going to harvest timber, you will need to work with a professional consulting forester—either the person who wrote your plan or another forestry consultant of your choice.



A Final Thought

Every day we depend on products or services that come from the forest. Each time we alter the web of forest life, we have an obligation to see that our actions help protect the forest's long-term existence and the diversity of living organisms that call it home.

Because we all use and enjoy wood and paper products, because we all benefit from the clean air and water that forests provide, and because we all need and want the

peace and beauty of our forests, we must work to maintain a balance that allows us to use and enjoy our forests while promoting their vitality over the long run.

Forest stewardship challenges us first to understand the natural processes that take place in a forest. Then it challenges us to ensure that when we alter these processes, we do so in a way that continues to enrich the lives of all who depend on forests—wildlife, humans, and generations yet to come.

PENNSSTATE



College of Agricultural Sciences
Agricultural Research and Cooperative Extension

Revised by Allyson Muth, research support associate.

Originally prepared by Ellen M. O'Donnell, stewardship associate; Shelby E. Chunko, research support associate; and James C. Finley, professor of forest resources.

Illustrations by Doug Pifer.

Visit Penn State's College of Agricultural Sciences on the Web: www.cas.psu.edu

Penn State College of Agricultural Sciences research, extension, and resident education programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

This publication is available from the Publications Distribution Center, The Pennsylvania State University, 112 Agricultural Administration Building, University Park, PA 16802. For information telephone 814-865-6713.

This publication is available in alternative media on request.

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, gender identity, or veteran status. Discrimination or harassment against faculty, staff, or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901; Tel 814-865-4700/V, 814-863-1150/TTY.

Produced by Ag Communications and Marketing

© The Pennsylvania State University 2008

Code # UH075

Rev3M04/08mpc4282



The Forest Stewardship Program is administered nationally by the USDA Forest Service and is directed in Pennsylvania by the DCNR Bureau of Forestry with assistance from a statewide steering committee. The Forest Stewardship Program assists forest landowners in better managing their forestlands by providing information, education, and technical assistance. For more information about program services, contact the Pennsylvania Forest Stewardship Program, DCNR Bureau of Forestry, PO Box 8552, Harrisburg, PA 17105-8552; phone: 717-787-2160. For more information about publications, contact the Pennsylvania Forest Stewardship Program, Penn State School of Forest Resources, 320 Forest Resources Building, University Park, PA 16802-4705; phone: 800-235-9473.

Printed on recycled paper.