An aerial photograph of a winding river flowing through a vast, open landscape. The river is dark and meanders across a terrain of light green and yellowish-brown, likely a wetland or a large forest clearing. The background shows a dense forest of tall, thin trees under a clear sky.

Ensuring Sustainable Forestry

Through Working Forest Conservation Easements
in the Northeast

A Forest Guild Perspective

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Northeast Regional Director
Forest Guild
June 2006



forest conservation easements



The FOREST GUILD: Ten Years and Growing

The mission of the Forest Guild is to bring ecological forestry into the mainstream by the year 2025. The common bond of Guild members is a passion for forests and land stewardship. The practice of conservation forestry and the promotion of stewardship ethic are the heart and soul of the Guild. We are advocates for silvicultural systems that protect a full suite of public values in the forest and maximize the long-term productivity of the forest resource. A set of Forest Guild policies is available on our website (www.forestguild.org); they present our positions on wildland protection, liquidation cutting, regeneration and silvicultural systems, and other topics.

The Forest Guild was founded in 1996 and now has a national membership approximately 600 strong, estimated to be two to four percent of all foresters in the country. Each Guild member pledges to uphold our mission and principles, which are also available on our website. These principles comprise a unique set of standards, which represent our members' philosophical approach, professional expertise and deep love for the forests we manage and the communities that depend on them. Our first duty principle distinguishes Guild members by placing the care and sustenance of forest ecosystems as our number one priority. We also recognize that forests have intrinsic value separate from economic values.

Not every forester who manages according to the Guild principles is a Forest Guild member. There are many excellent foresters and associated forest resource professional allies we invite to join us in our long-term mission. For more information on the Forest Guild please visit our web site or contact our national or regional offices.

INTRODUCTION

Over the last thirty years, conservation easements have become an important tool in land protection. While conservation easements were initially used to address the most commonly perceived threat – land development – there is now a rising interest in creating easements to promote a range of ecological, recreational, and economic values. An increasing number of easements protect “working forests” by restricting development while allowing the practice of forestry. This report is about working forest conservation easements (WFCEs) in the Northeast and how they can be designed to ensure sustainable forestry and safeguard important public values.

Members of the Forest Guild have witnessed the proposals, negotiations, and final results of a number of easement transactions. Our goal as an organization is to bring sustainable, ecologically-based forestry to all our nation’s lands. We regard working forest conservation easements as public investments. Our concern, though, is that some easements may not provide the quality of forest management that the public deserves. Without the involvement – the experience, ethics, and knowledge – of ecologically-minded foresters, easement transactions will fall short of their potential, resulting in poorly managed forests that let the public, the landowner, and the local ecosystem down. The consequences could mean further disruptions in quality timber supply for local economic growth opportunities, declining habitat for at-risk plant and wildlife species and degraded recreational sites that could support an expanding tourism industry.

This report includes a survey of three working forest easements and evaluates how well each easement and its related documents ensures sustainable forestry. To guide that evaluation we identify eleven possible approaches to easement design that yield different levels of assurance that public values will be protected. While each land ownership is different, and there is no one-size-fits-all WFCE, these three examples contain a number of key components that can be selectively combined to improve the next wave of easements. We encourage land trusts, governmental agencies and forest landowners to work with ethical professional foresters to design the most practical, efficient, ecological, silvicultural, and economical easements possible.



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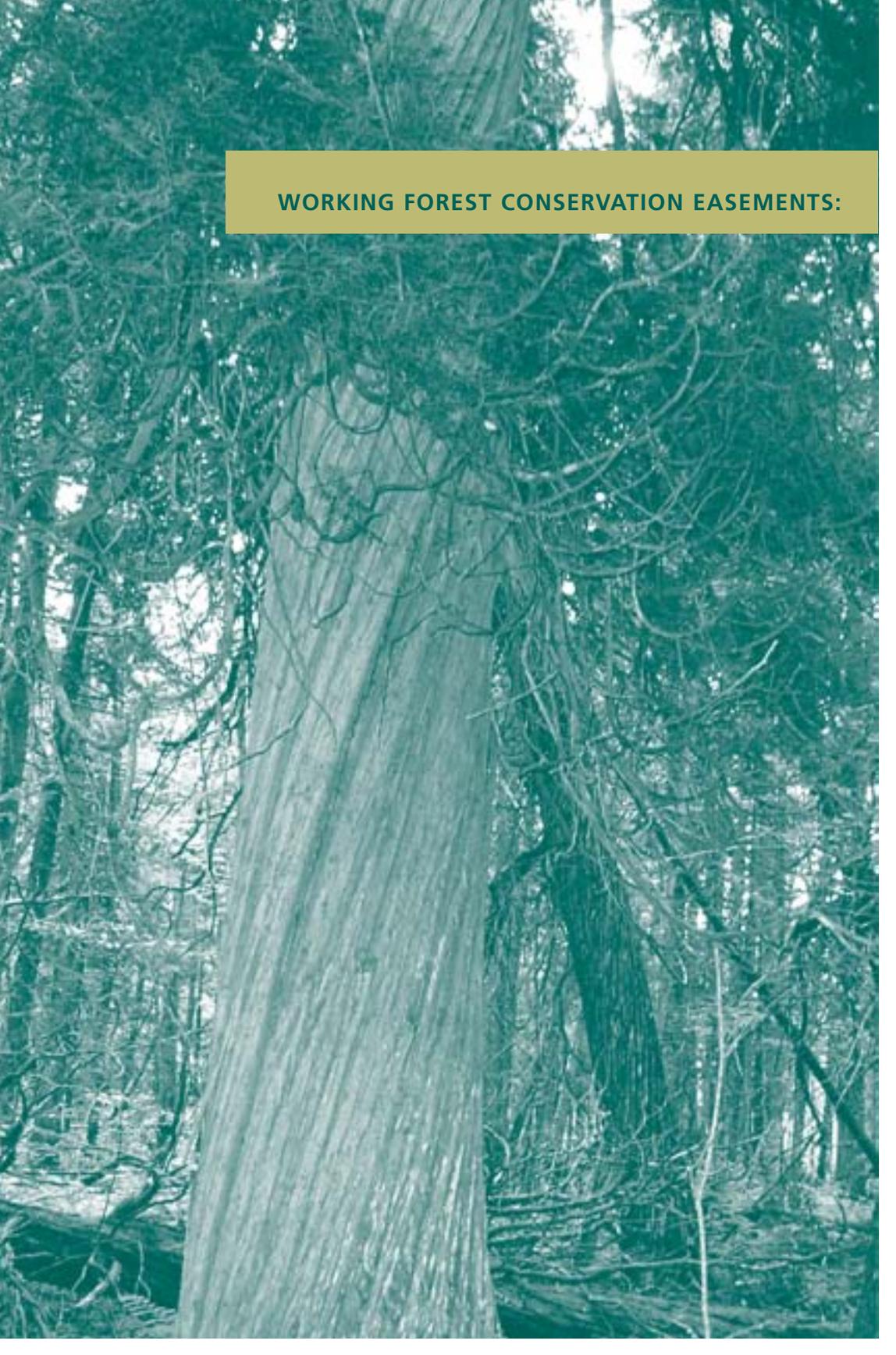
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A photograph of a forest with a large tree trunk in the foreground, overlaid with a teal color filter. The text "WORKING FOREST CONSERVATION EASEMENTS:" is centered in a yellow box.

WORKING FOREST CONSERVATION EASEMENTS:

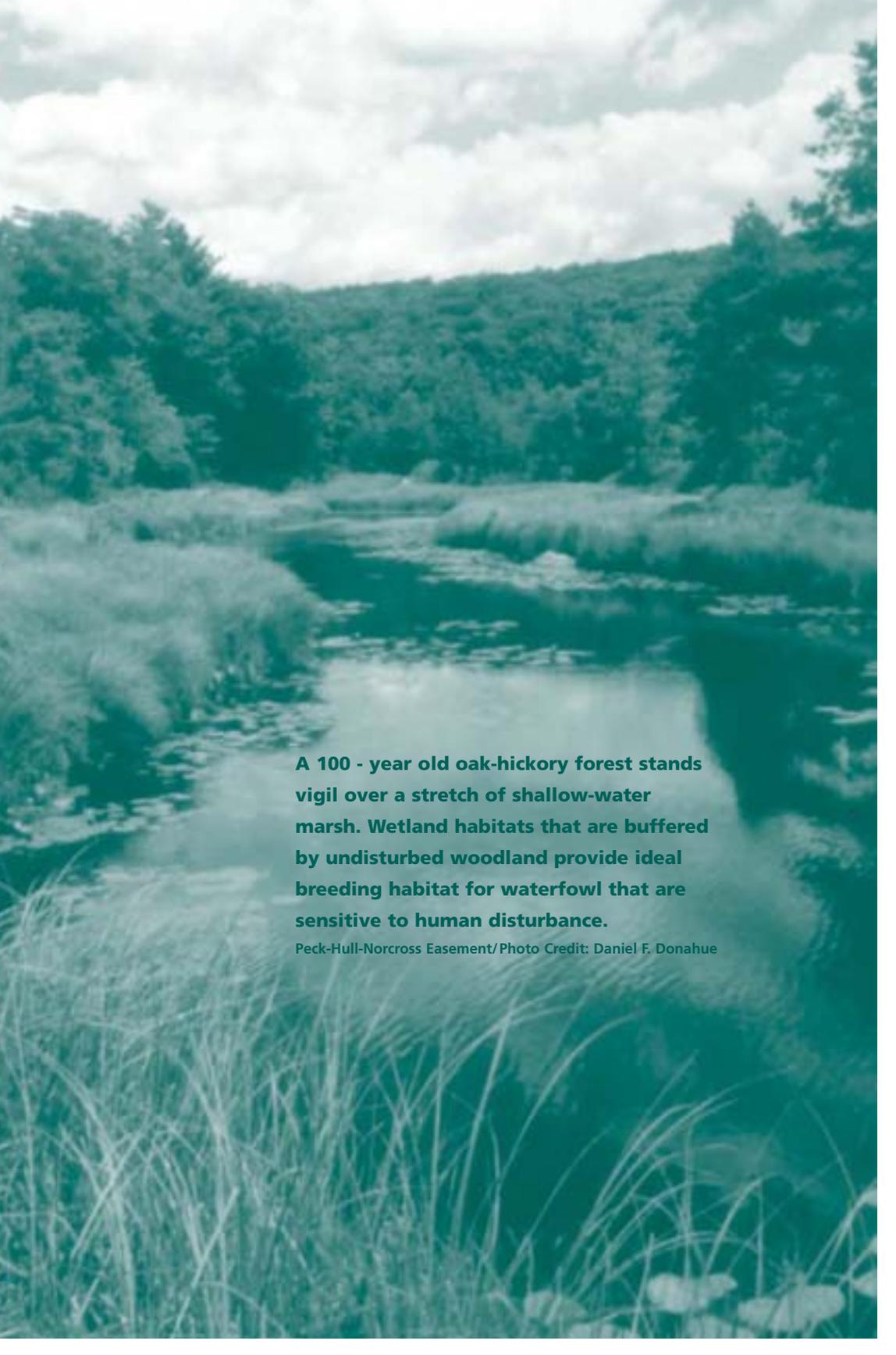
FROM STOPGAPS TO SUSTAINABILITY

The past three decades of sprawl and forestland development have brought about a surge in membership for local and national land trusts, who use conservation easements as a primary conservation tool. At the same time, conservation easements have grown more common and more highly evolved. In the forested Northeast, the wholesale divestiture of millions of acres of industrial forestlands in New England and New York is exacerbating suburban, rural, and wildland sprawl. With this huge acreage on the market and little money for outright purchase, the attention of forest advocates has shifted to conservation easements as a less expensive way to gain some level of protection. With the introduction of new funding sources, such as the federal Forest Legacy program, the region has already witnessed a number of record-setting working forest conservation easements.

In the early land deals, forest managers and landowners demonstrated scant interest in restricting management options, regarding easements as vehicles to maintain the status quo of land management decisions. Anything more was outside the easement framework. However, as publicity and public funding increased, pressure from the public to gain fair value for its investments increased as well. A re-framing of the working forest conservation easement began and continues.

At their worst, the early WFCEs were often regarded as another public payoff to landowners who never practiced sustainable forestry and owned little land suited for development. Even at their best, WFCEs were seen as stopgap measures to halt widespread development of wildlands, and as contracts that secured unenforceable voluntary promises of sustainable forestry.

As the deals multiplied, forest advocates sought easement designs that would maximize public benefits. Nowadays, the goals extend beyond merely halting development to include ensuring public access, and requiring proper land and timber management. Because placing an easement is not a landowner's legal obligation but a voluntary act, any steps toward conservation goals must lead toward the landowner's economic goals as well. Thus, the negotiation phase of the easement transaction is critical. During negotiations, the evolving thinking on the nature and purpose of working forest conservation easements must come to the fore and merge with practical, on-the-ground examples of what it is possible to deliver through ecologically—and economically—based forestry.



A 100 - year old oak-hickory forest stands vigil over a stretch of shallow-water marsh. Wetland habitats that are buffered by undisturbed woodland provide ideal breeding habitat for waterfowl that are sensitive to human disturbance.

Peck-Hull-Norcross Easement/Photo Credit: Daniel F. Donahue

How the Public Invests

A close look reveals that most conservation easements come with significant public subsidy.¹ Charitable donations for easements earn the donor income tax deductions and are thus subsidized by the public. In many cases, easements reduce the real estate and estate taxes – another public subsidy. The public also invests in conservation easements by providing tax-exempt status for land-trusts and public funding for government holders.² Tax revenues are funneled through public programs like the federal Forest Legacy program to purchase easements. While every easement is different, the substantial public investment in most easements constitute a public interest.

What the Public Wants

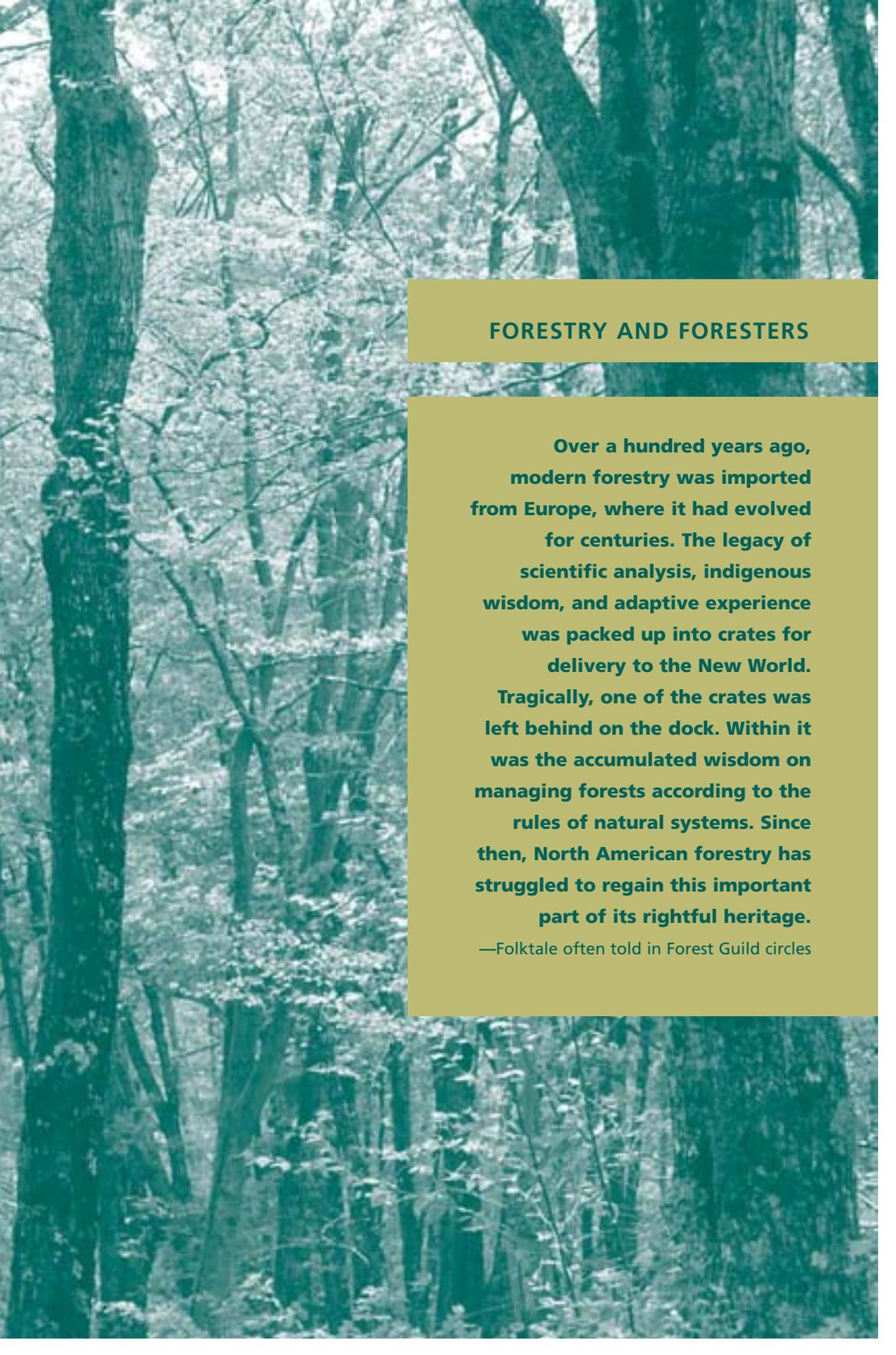
The Northern Forest Alliance, a 50-member coalition of conservation, recreation, and forestry organizations, provides a working description of the benefits the public ought to expect from WFCEs. The 2001 report on conservation easements states:

Ideally a working forest conservation easement should provide permanent protection of public benefits associated with undeveloped forest areas, while allowing other uses, such as commercial forest management, compatible with the purposes of the easement. Some of these public benefits include maintenance of healthy ecosystems, clean air and water, recreational access, conservation of biodiversity, scenic values and productive forest resources.³

¹ Pidot, Jeff. *Reinventing Conservation Easements: A Needed Work in Progress*. Cambridge, MA. Lincoln Institute of Land Policy. 2004.

² *Ibid.*

³ Northern Forest Alliance. *Conservation Easements in the Northern Forest: Principles and Recommendations for the Development of Large-Scale Conservation Easements in the Northern Forest*. Stowe, Vermont. 2001.



FORESTRY AND FORESTERS

Over a hundred years ago, modern forestry was imported from Europe, where it had evolved for centuries. The legacy of scientific analysis, indigenous wisdom, and adaptive experience was packed up into crates for delivery to the New World. Tragically, one of the crates was left behind on the dock. Within it was the accumulated wisdom on managing forests according to the rules of natural systems. Since then, North American forestry has struggled to regain this important part of its rightful heritage.

—Folktale often told in Forest Guild circles

Before we consider the case studies, it is important to cover some background on the forestry profession. As the fable opposite suggests, forestry is far from a universally mature science in the United States, and some foresters are more dedicated to responsible, ecological silviculture than others. Meanwhile, landowners and designers of working forest conservation easements must choose among forestry professionals for expert advice. Too often they make the choice to do business with foresters who do not hold the goal of long-term sustainable management for ecological values.

Fortunately, there has been a great deal of progress in promoting professional, ethical foresters to assist landowners. But even in a very progressive state like Massachusetts, a licensed forester is still not required to file a harvesting plan, and the state service foresters approve cutting plans that, according to actual written statements on the forms, will result “in a residual forest stand dominated by poor quality trees and low value species.” Thus, forestry and forest regulation are still in need of major reform and professional foresters still hold widely divergent opinions on critical issues that affect the long-term health and productivity of the forest. Members of this diverse professional community are typically engaged by both the easement recipient and the landowner to help work out the components of working forest conservation easements. The easement recipient, often a land trust or government agency, is interested in protecting the public interest, ensuring sound forestry practice and maintaining or restoring the ecological values of the property. Landowners share much the same concerns, but are particularly interested in crafting easement guidelines that are sound financially as well as ecologically. In order for these parties to select the right forester for the negotiation and/or subsequent management of the property, it is important to understand the philosophical differences that play out in management approaches. Here are five current, much debated, forestry issues to bear in mind when selecting a forester.

Issue 1: Public Benefits from Commercial Forest Products Production

The public directly benefits when forests yield useful wood products for buildings, furniture, paper goods, and energy, and it is important that our forests can yield these products in a sustainable manner. However, within those general ideas there are some important nuances. For instance, some silvicultural approaches ensure that there will be a forest in a hundred years and that it will yield an array of products. In one sense, this is sustainable forestry. But an approach can meet these criteria and still leave out social considerations such as compatible regional tourism aesthetics or the availability of large, quality sawlogs.

Too many times the mid-term (10-40 years) productivity of a forest is sacrificed for short-term economic gains while managers and landowners hide behind the technical fact that the forest is being regenerated and will again produce products at some point in the future. Under this kind of short-term thinking, most forestry treatments become regeneration cuts (that is, harvests that remove the larger trees and turn the future of the forest over to seedlings and saplings) that set off a boom-and-bust cycle, continually

hampering our ability to grow exceptional forest products and build healthy forest-based economies and communities. This approach is why one can drive for hours in the Northern Forest of Maine and never see a tree as large as fifteen inches in diameter; or why woodlot after woodlot in southern New England meets the technical definition of “forestry” and receives state approval but have been high-graded so severely⁴ that they will not produce marketable crops for twenty or thirty years.

One of the goals of the Forest Guild is to practice and promote management that balances and meets the short-, mid-, and long-term needs of society. There is currently an over-reliance on even-aged silvicultural methods. While even-aged systems are appropriate for some situations, the Guild believes uneven-aged and selection system management should be better integrated into the management of working forest conservation easements. These approaches may result in less short-term gain in favor of even greater mid- and long-term gains, but they also bring an increase in other public benefits, such as more pleasing recreational sites and more diverse wildlife habitat.

Issue 2: Selection System Silviculture

A selection system management regime allows the maintenance of continuous forest cover by selectively removing individual trees or small groups of trees. The new forest is gradually and continuously regenerated from these small removals. Compared to even-aged management, the selection system is usually aesthetically more pleasing, is often more similar to natural disturbance regimes, provides for a greater diversity of age classes and species, and easily provides for retention of biological legacies. The selection system is not appropriate for every situation, but Forest Guild members find many more opportunities to manage forests this way than is generally accepted within forestry circles. A famous example is in Missouri’s Pioneer Forest: When Guild member Clint Trammel started there in 1970, he was told that certain selection system practices would not work in the oak-hickory timber types. But with this system, the standing volumes have increased by 225% and the growth rates have increased by 147%. Even so, we are still hearing the same negative predictions about selection system management in the Northeast.

Issue 3: Species Composition and Its Role in Sustainable Forestry

Over time, certain tree species become adapted to site conditions and natural disturbance patterns. But human activity, particularly forest harvesting, can disturb the balance. Forest Guild members attempt to manage forests by utilizing those native species that are naturally adapted to a site. The Guild thinks this is forestry as it was meant to be practiced. While our approach is supported by the ecological and silvicultural literature, every member of the forestry profession does not always support it. For instance, under Massachusetts forest harvesting laws, it does not matter which

⁴ High grading is the practice of harvesting larger and/or more valuable trees, and leaving the poorest growing, lowest value growing stock for the future.

species a harvest leaves behind as a retention crop; nor does it matter which species are caused to regenerate. Only the number of trees and quality of those trees are criteria for approval. Forest Guild members are trying to change this policy.

Issue 4: Forester Licensing

Most state forester licensing programs do little to ensure that forests are managed in a sustainable manner. Existing forester licensing programs vary widely in their requirements. In some states, licensing is mandatory, while in others it is voluntary. Typically, licensing programs require some combination of testing, field experience, and academic degrees. Most programs do not set expectations about sound silviculture or conservation of non-timber values. Such programs provide little in the way of protection for the forest resource, or indeed for forest landowners and other clientele that foresters serve.

The members of the Forest Guild believe that all forestry should be conducted under the supervision of a licensed forester who can certify accordance with sound silvicultural and ecological principles. Thus, the Forest Guild supports the development and establishment of meaningful forester licensing programs.⁵ Requiring qualified foresters to be involved in all forestry operations and requiring that those foresters implement sustainable forestry practices could dramatically improve the practice of forestry and increase the yield of public and private benefits. Unfortunately, many foresters object to licensing or the strengthening of licensing programs. Lack of support across the forestry community is one of the primary reasons we do not have effective safeguards against poor forestry practices.

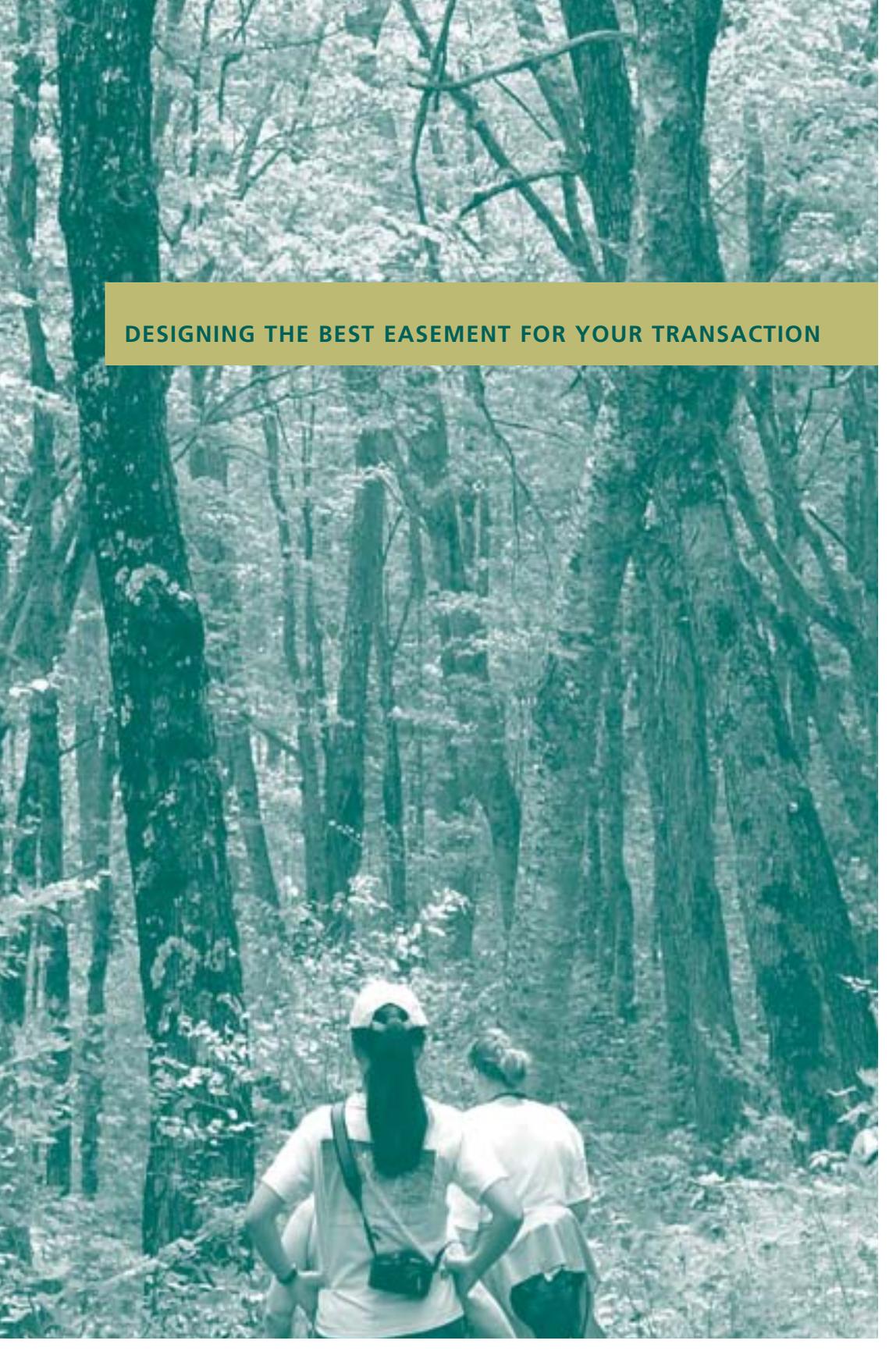
Issue 5: Ethical Standards of Conduct

The Forest Guild is the only professional forestry organization that calls on its members to manage according to a land ethic that puts the needs of the forest over short-term gain. Our “first duty” principle reads:

A forester's first duty is to the forest and its future. When the management directives of clients or supervisors conflict with the Mission and Principles of the Guild, and cannot be modified through dialogue and education, a forester should disassociate.

The professional ethics of other forester organizations focus more on the relationships among people and make it clear that a forester is in the service of his or her employer. This ethical system sets up a conflict of interest between the short-term financial needs of an employer and the long-term ecological needs of the forest. Many of our members have worked to raise the ethical standards of other forester organizations, but up to now, the Forest Guild is the only organization that has accepted an ecological “first duty” principle.

⁵The Guild's website contains more on our licensing positions.

A teal-tinted photograph of a dense forest. In the foreground, two people are standing with their backs to the camera, looking into the woods. The person on the left is wearing a white t-shirt, a white cap, and a black fanny pack. The person on the right is wearing a white t-shirt and dark pants. The forest is filled with tall, thin trees and a thick canopy of leaves. A horizontal teal bar is overlaid on the image, containing the text "DESIGNING THE BEST EASEMENT FOR YOUR TRANSACTION" in white, uppercase letters.

DESIGNING THE BEST EASEMENT FOR YOUR TRANSACTION

While some may wish for a standardized WFCE, each site and situation is unique and so must be every WFCE. First of all, different landowners will have different goals, and in a voluntary agreement, those goals must be considered. Second, the optimum silvi-cultural practices vary by forest type, historical treatment of the forest, current stand dynamics, available markets, and other factors. However, a general review of easements in the Northeast reveals a number of possible approaches that yield different levels of assurance that public values will be protected. The levels of easement design may be organized under two design approaches (Existing Standards and Tailored) and demonstrate eleven increasing degrees of assurance. The Case Studies in the last section of this report are analyzed and evaluated according to the approaches and levels of assurance that follows: ⁶

Eleven Design Approaches to Easements that Assure Sustainable, Ecological and Economical Forestry



Level of Assurance	
Level eleven -	Prescribed practices
Level ten -	Defined performance expectations
Level nine -	Defined components of a forest management plan
Level eight -	Defined management goals
Level seven -	Defined management principles
Level six -	Reliance on professional forester associations or certification
Level five -	Reliance on forest management certification systems
Level four -	Reliance on "best management practices"
Level three -	Reliance on state forester licensing programs
Level two -	Reliance on existing definitions of "good forestry"
Level one -	Reliance on state, local, and federal laws

⁶ Our assumption is that each level, if included in the easement language, will be adequately enforced. This explains why some standard voluntary practices are rated higher than currently regulated practices. The inclusion in the easement takes a voluntary practice and makes it a required practice for the forest land in question.

Design Approaches Using Existing Standards

Existing standards can be an effective floor in the effort to protect forest values. They are readily available, generally understood, and easy to integrate into an easement. They often draw on years of professional forestry experience and dialogue, and provide a certain method of balancing the protection of ecological values with commercial interests. In some cases, they reflect the best available science and may be as well suited to provide management direction as anything that could be specifically developed at a reasonable cost. In other cases, they represent only a weak set of voluntary efforts to correct a system of practices already out of control. As the result of many compromises, they can be vague and so full of loopholes as to be almost worthless.

Easement designs that rely only on existing standards, particularly Level One through Four, do not offer a great deal of assurance of long-term sustainable forestry. As noted above, the relative assurance these standards offer must be determined on a case-by-case example. One set of state regulations or certification standards may be weak while another set may be stronger. It is important that the easement recipient understands the existing standards being considered for inclusion in an easement and obtains a fair, knowledgeable, unbiased professional opinion of their usefulness. In some cases, studies are available that evaluate the effectiveness of various standards.

Level One Assurance: Reliance on state, local, and federal laws

Easement designers should be aware of existing standards—legal and voluntary—that must guide sustainable management on the property. The landowner is bound by law to follow legal regulations, and the easement usually also provides a clause stating that fact. Following state, local, and federal laws is the easiest fallback position because they set an enforceable floor for forest management.

Many states have forestry laws and agencies responsible for their enforcement. However, while there has been improvement over the last 15 years in state laws, they are rarely enough to ensure good silviculture. General and permissive, these laws generally provide little more than reactive punishment for the most egregious violations of forestry practices rather than proactively encouraging sustainable forestry. Maine laws, for instance, limit clearcutting and prevent liquidation harvests on properties that are bought and sold quickly, but do little to prevent high-grading and other damaging practices. Furthermore, enforcement of forestry laws has often been insufficient.

Most federal laws are not applicable except in cases of endangered species. Local laws are typically nonexistent.

Level Two Assurance: Reliance on existing definitions of “good forestry”

Most WFCEs state that the grantee will practice good forest management, often in language containing the highly debated term “sustainable forestry.” Other slippery terms are “sound forestry,” “ecologically based forestry,” and “nature-based forestry.” An alternative to using malleable catch phrases is to state that forest management practices must ensure that all ecological values will be protected.

This is classified as an existing-standards approach because there has been a great deal of discussion within the forestry community regarding what ought to be meant by “sustainable forestry” and how it is achieved.⁷ There are sustainable forestry boards, initiatives, networks, projects, and certification systems. Academics, industry, field foresters, and environmental groups have proposed a number of definitions, and there is no consensus within the profession.⁸ If an easement holder indicates that “sustainable forestry” is the objective but leaves the definition of this term open to interpretation, any one of hundreds of definitions could be used to direct forest practices.

To avoid making a grave mistake, the easement recipient should familiarize himself or herself with the range of definitions. Then, it is possible to build a definition into the easement or to select a definition from the literature that both the easement recipient and the land manager can agree upon.

While most definitions are general and establish broad principles for sustainable forestry, it may be possible to locate an acceptable regional definition that is more applicable to the property and forest types in question. An example of a regional definition for the Northern Forest appears in “Forestry for the Future,” a 1999 publication by the Northern Forest Alliance. A state-based example is the Maine Audubon Society’s 1999 “Verifying Sustainable Forestry in Maine.” An example of sustainable forest guidelines for subregional forest types is The Nature Conservancy’s “Managing Rich Northern Hardwood Forest for Ecological Values and Timber Production: Recommendations for Landowners in the Taconic Mountains of Vermont.”

Level Three Assurance: Reliance on state forester licensing programs

Many states now license foresters. Licensing provides the opportunity to indicate that a WFCE must be managed by state-sanctioned professionals. This approach provides a level of security that is only proportionate to the rigor of the licensing program.

Historically, these programs have been largely ineffectual, varying widely in their requirements and doing little to ensure sustainable forest management. Most are designed primarily for the purpose of “titling,” or allowing qualified persons to refer to themselves and sell their services as a “forester.”

⁷A recent Google search of the term brought up 11,700 hits.

⁸For a few different interpretations of the term, see the National Commission on Science for Sustainable Forestry; Chadwick Dearing Oliver. July/August 2003. “Sustainable Forestry: What is it? How do we Achieve It?” *Journal of Forestry*; and Aplet et al. [eds.]. 1993. *Defining Sustainable Forestry*, The Wilderness Society.

Licensing programs allow some surprising loopholes. For example, Massachusetts has forester licensing, and you cannot technically say that you are practicing forestry unless you are licensed. However, the state approves all cutting plans, allows unlicensed foresters to write cutting plans, and grants approval for unlicensed foresters to complete harvests. Moreover, it is generally acknowledged that the management philosophy and practices of Massachusetts licensed foresters vary greatly.

So forestry programs are not comparable to medical or other professional licensing programs. Land trusts should become informed about their particular state licensing program and use this level of assurance only as it is appropriate to the easement goals. The Forest Guild believes that professional forester licensing could be transformed into a powerful tool for the long-term protection of ecological and economic forest values, and we are working to make this transformation happen.⁹

Level Four Assurance: Reliance on “best management practice”s

Best management practices, or BMPs, are designed at the state level to guide forestry practices in lieu of regulations. Many states have revised BMPs in recent years to make them strong and useful guidelines. They can be particularly useful in guiding harvesting operations and halting the most egregious equipment damage to soil and water.

BMPs are less useful as guides to specific silvicultural practices for desired ecological conditions. Debate continues over how effective they are in encouraging the use of excellent silvicultural practices. Land trusts should familiarize themselves with these state guidelines and consult trusted local foresters to gauge their effectiveness.

BMPs might, however, be useful in negotiating certain practices in the easement. For instance, what the land trust is asking for may not be covered by state law but may be clearly spelled out in the current BMP. If a manager has already agreed in principle to restrictions defined by the BMP, the easement holder has a tenable starting place for further negotiation.

Level Five Assurance: Reliance on forest management certification systems

There are now several forest management certification systems available, but they vary in their ecological principles, standards, and degree of impartiality. They may follow national or regional guidelines and be particularly suited to the individual goals of owners and easement holders. They can also be expensive.

The best certification systems provide valuable information and important oversight of operations. They ensure that professionals are monitoring the property periodically. The seal of approval from a known certification system can provide the added benefit

⁹For more information, visit our website: www.forestguild.org/forestry_licensing.html and www.forestguild.org/privatelands.html.

of market incentives for ecologically sound forest management. The use of a certification-system approach perhaps works best when paired with additional requirements developed specifically for the property in question.

The Forest Guild endorses the Forest Stewardship Council as the best third-party certification system available. The Guild contributed to FSC's third-party certification of forest products by participating in the development of regional standards.

Level Six Assurance: Reliance on professional forester associations or certification

Forestry professionals, like other professionals, form and join associations to exchange information and promote the well being of their profession. Each forestry association is distinguished by its principles, code of ethics, policy statements, and actual advocacy positions. Some are national, such as the Forest Guild, the Society of American Foresters, and the Association of Consultant Foresters. These associations are designed primarily around the professional forester, although they may include allied natural-resource professionals in different membership categories. There are also state-based forester associations, such as the Massachusetts Association of Professional Foresters.

In addition, there are forest organizations that are not designed around forestry professionals but include foresters, landowners, and others interested in protecting forest resources. American Forests is a national example. The Connecticut Forest and Park Association is a state example. Some of these organizations are supported by the forest industry and are involved in advocacy, lobbying, and education. Some, such as the American Tree Farm Program and the American Forest and Paper Association, have industrial members. Most states have forest industry organizations, such as the Massachusetts Wood Producers Association and the Maine Forest Products Council.

Some of these organizations, such as the American Tree Farm System, offer certification of forest management, but not on par with other third-party certification systems. Other organizations, such as the Society of American Foresters, offer a certification program for foresters, but this program doesn't offer much assurance of ecological practice other than that the forester is an educated and trained professional who has attended a requisite number of relevant courses.

Land trusts, governmental agencies and landowners must be able to distinguish among these various organizations to determine how a forester's affiliation might indicate his commitment to ecological forestry and his regard for the interests of the forest and the goals of the landowner. The Forest Guild encourages easement recipients and landowners to investigate the principles, policies, and actual advocacy of any organization they are thinking of including in the easement transaction—including the Forest Guild.

Design Approaches Tailored to the Ownership

Another approach to securing sustainable forestry is to include specific management requirements in the design of the easement or associated documents. The list below continues to rate these approaches according to the degree of sustainability assurance they provide.

Some of these assurances stop at the expression of principles (Level Seven), although the principles can be either general or specific. Other approaches (Levels Eight and Nine) express a desire for particular outcomes, either through a set of management goals or an actual forest management plan. The latter approach, the forest management plan (Level Nine), is a hybrid approach that encompasses both principles and outcomes. Level Ten Assurance sets performance expectations with still greater precision, while Level Eleven prescribes actual forestry practice.

Level Seven Assurance: Defined management principles

Statements of principle articulate the general purpose of the easement and clarify the agreement between the parties. However, most statements of principle use terms that are widely debated both inside and outside the forestry community. Easement designers should understand the parameters of that debate and develop language that alleviates possible confusion.

Statements of principle are often included in the purpose section of the easement document. The statement can be specific or it can be general, supported later in the document by statements of goals that clarify its meaning. For example, the West Branch easement, which will be reviewed later in the report, does not mention biological diversity in the purpose section although it is prominent later in the document.

If management principles are stated too generally, they function only in reference to existing standards. For example, consider a statement such as “The landowner will practice ecologically, economically, and socially sound forestry practices in perpetuity.” What this means for practice on the ground depends on how this phrase is interpreted. Which forms of biota will be protected? Will management protect fungi as well as charismatic species such as eagles? Will the wildlife-management emphasis be on game species or rare and endangered species? Sustainable growth and yield could be achieved by harvesting most mature trees in year one, regenerating the stand, and expecting the next harvest in 60 years or it could be achieved by harvesting small amounts every five to eight years and always maintaining a mature and biologically diverse forest.

The strongest statements of principle carry information that heads off interpretative debate. Principles can mention biological diversity of specific species, name types of

wildlife habitat, or call for particular rates of growth and yield. Statements like these can even begin to transcend the limits of theoretical principles and become specific management goals (see Level Eight).

Level Eight Assurance: Defined management goals

This approach adds the next level of specificity. Management goals are statements like these:

- Maintain and enhance native wildlife habitat
- Identify and protect unique fragile areas
- Maintain full function of all ecosystem components
- Maintain a sustainable flow of forest products

These phrases can easily be expanded into descriptions of performance expectations, as in the Level Ten Assurance, below.

Level Nine Assurance: Defined components of a forest management plan

Some easements do not require a forest management plan. They should. The working forest is a dynamic ecosystem continually affected by changing social and economic forces. Forest management must consider time frames of decades and centuries. Static requirements in an easement can be problematic and work against ecosystem health. Easement designers can work out the tension between long-term ecological goals, short- and long-term economic goals, and the inherent dynamism of the forest system through a flexible and adaptive management planning process.

Managers need the flexibility to adapt to the changing conditions in the forest and marketplace over time. No easement can completely prepare a property for the introduction of invasive pests, climate change affecting species composition, shifts in global forest-product availability, and changes in consumer preferences for certain products. In addition, new discoveries in silvicultural methods and new understandings of biological systems will arise, and managers should be able to adapt their practices through a planning process. Updating the management plan every ten years allows flexibility while maintaining specific goals, principles, expectations, and prescriptions (see Levels Ten and Eleven) that can be measured, monitored, and adapted for.

It is important that the parties agree on the basic design of the plan and the values it seeks to manage. A good way to inform the planning cycle is to agree on a baseline of ecological information. An ecological baseline serves as a clear indication of what is important and what should be measured and maintained. This baseline can be updated with each planning cycle to provide the data for the next round of performance measurements.

Some easements require that the easement holder be provided copies of the management plan. Stronger easements use the planning cycle as a vehicle for ongoing dialogue among the parties. The strongest require approval of the management plan by the easement holder.

Level Ten Assurance: Defined performance expectations

The focus at this level is on expectations of the forest's performance. Easements providing this level of assurance may include specificity on the process forest managers should follow to achieve the desired performance, but they stop short of prescribing actual silvicultural practices. The major question is: How will the parties determine whether the performance expectations have been met? The ideal situation is to have a hard target such as a certain number of den trees per acre. But often such targets cannot be set. There may not be sufficient scientific information or the parties may not agree on what is an optimum result. In those cases an initial baseline will allow the parties to measure and evaluate performance that is progressing toward a soft target. Here are the management goals from Level Eight, expanded into performance expectations:

- Maintain and enhance native wildlife habitat for all vertebrate species after first conducting a natural resource inventory.
- Identify and protect unique fragile areas by integrating methods for protection into the management plan.
- Maintain full function of all ecosystem components by using certain measurable criteria to determine management effects and by performing periodic evaluations.
- Maintain a sustainable flow of forest products by managing for growth and scheduling harvests in each ten-year management plan.

Level Eleven Assurance: Prescribed practices

At this level, the management plan prescribes specific forestry practices. This level provides the greatest assurance that the easement recipient will obtain the particular ecological benefits he or she desires. Management practices are selected by the landowner/manager and easement recipient to maximize both timber production and ecological benefits.

In place of the more general goal to "maintain and enhance native wildlife habitat," this level could contain language like this, taken from the Peck-Hull-Norcross easement (reviewed below):

Identify and assess in the Forest Management Plan at the stand or management unit level:

- Sources of wildlife food, cover and water
- Vernal ponds, groundwater seeps, den trees, snags, mast producers, etc.
- Practices to develop early-seral habitats

And a few examples from the Peck-Norcross easement of how management techniques can be prescribed for integration into a management plan:

- Use the selection method to regenerate trees.
- Use the volume method of regulation to ensure a sustainable yield.
- Harvest levels must not exceed annual growth.
- Stands must be maintained in a fully stocked and productive condition.
- Silvicultural strategy must maintain the original diversity of natural forests.
- While there is no universal rotation age for the forest, trees must reach 18"–24" DBH before they may be considered commercially mature.

Summary of Easement Approaches

Easements typically utilize both design approaches and a number of levels of assurance. Designs for new easements can be strengthened by moving beyond the low-level assurances of the Existing Standard approach and integrating levels of assurance that are tailored to the property in question. We hope this taxonomy offers easement designers a way to gauge the effectiveness of possible approaches to easement design and encourages the inclusion of higher levels of assurance. The following case studies demonstrate how techniques with higher levels of assurance have already been integrated into some major easement transactions.

CASE STUDIES:

The following case studies illustrate the assurance of protection of public values provided by the eleven levels discussed above. We have considered three fairly well known and pivotal working forest conservation easements and examined how they used the various levels.

We rated each easement by the highest level of assurance provided in the easement documents. Many other factors influence what kind of management actually takes place on these lands. However, we hope these case studies will help future easement designers to consider and implement the most helpful approaches.

THE PINGREE EASEMENT

(Level Nine-Defined components of a forest management plan)

An existing standards-forest management plan approach on a 762,192-acre northern Maine family partnership

In 2001 the Pingree family sold to the New England Forestry foundation the development rights to 762,192 acres of the Northern Forest for \$37.10 an acre. This transaction included a working forest conservation easement. As of this writing, this conservation easement is the country's largest. Although the project was originally billed as privately funded, it eventually used \$1 million from the federal North American Wetlands Conservation Act, \$2 million from the National Fish and Wildlife Foundation, and \$1 million from the Rhode Island oil spill funds.

How the Land is Protected: Existing Standards Plus Forest Management Plan

The easement did not involve the purchase of any right of public use or access, although it states that "traditional public recreation" would be allowed. The easement indicates that sustainable forestry practices must be followed using some of the standards from certification programs as guidelines. Several years before the easement was completed, the Pingree lands were approved as sustainable by the Forest Stewardship Council. Although the easement does not require that FSC certification be maintained, it does stipulate that if the FSC certification is dropped, the forestry practices must be guided by an attachment to the easement that includes a rough approximation of FSC guidelines (without the social components).

The guidelines state that the overall goal of the landowner is to work with the natural forest processes to grow sawtimber of superior quality and value over the long term, while always seeking to enhance the underlying value of the asset. In that context, the landowner must practice sustainable forestry, incorporating all ecological components and values into the management of the forest resource. The easement requires the landowner to:

- Use silvicultural practices that provide for a sustained yield of timber products while recognizing that ecological, aesthetic, wildlife, and other non-timber values are important components of the forest.
- Maintain individual stands in a well-stocked, productive condition.
- Strive to maintain the original diversity of natural forests in both species and structure, using up-to-date, scientifically based silvicultural practices.
- Maintain and protect riparian ecosystems, using riparian corridor management as the primary tool to address wildlife habitat, fisheries, and watershed management.
- Routinely incorporate wildlife management practices into timber management to retain or create desirable features such as riparian habitat, wildlife cavity

trees, mast availability, logs and brush for shelter, vertical and horizontal diversity, vernal pools, and featured species management. Wildlife management will consider all species of wildlife, beyond game and socially important species.

- Use pesticides only when absolutely necessary and implement management practices designed to minimize or eliminate future dependence on pesticides.
- Strive to maintain no more than 3% of the property in a clear-cut condition, except that “an additional 7% may be clear-cut as long as every additional clear-cut acre is matched” with an acre of land that was planted or pre-commercially thinned in the previous year. Clearcutting may be used for removal of only poor-quality, intolerant, understocked, short-lived, or residual overstories; ecologically appropriate improvement or creation of wildlife habitat; removal of stands that would be at high risk for windthrow if partially harvested; or plantation establishment and harvest.¹⁰

How Well Does the Pingree Easement Ensure that Public Values Are Protected Through Sustainable Forestry?

Most of the Pingree easement guidelines leave a lot of room for interpretation, especially as family composition changes or the land eventually changes ownership. For example, the guidelines call for silvicultural practices that provide sustained yield but identify neither practices to obtain the yield nor a method of measuring the yield. A second example is provided by the directive to maintain stands in a productive, well-stocked condition. Without more specific direction, management may have little connection to the specific values that are important to the public. The only way to monitor compliance with such a general guideline is to refer to a range of existing standards in textbooks or forestry manuals.

The guidelines are more specific where they identify the particular wildlife habitat features to be maintained. They also limit clearcutting. However, this latter detail seems more for the protection of the landowners’ flexibility to regenerate stands any way they wish than for the pursuit of public values. If there is a possibility of providing more specific guidelines in an easement, then why not add, for instance, requirements for mature forest retention or to define a specific acreage to be managed by the selection system? This would provide a more balanced set of guidelines that would meet the needs of commercial forestry as well as the public.

It is not the intention of this report to evaluate the cost-effectiveness or public value of these easement transactions. Our goal is to examine and evaluate the assurances that are integrated into the language of the easement and that are therefore enforceable. On this measure alone, the Pingree easement rates somewhere between a Level Five and a low Level Nine. On the high end, it deserves a low Level Nine because it does require a management plan, although what should be in the plan and what should be managed for are not defined with clarity. On the low end, it rates a

¹⁰See www.newenglandforestry.org/projects/pingreeeasement.asp for more details.

low Level Five because even though the property is now certified, there is no requirement for continued certification.

Each easement deal must be evaluated on its own overall merits. A committed landowner may do an excellent job of management even though the easement does not legally require it. In the Pingree deal, the low cost of the easement per acre (\$37.10), the very large size of acreage protected (762,192), the reputation for good management over decades, the existing management certification, and the transaction's prominent position as the first in a string of large easements in Maine would all weigh into the overall evaluation of the value of this easement to the public.

THE WEST BRANCH EASEMENT

(Level Ten-Defined Performance Expectations)

A performance expectations approach on 282,000 acres of Maine forestland

In 2002, the Forest Society of Maine completed negotiations on the 329,000-acre West Branch Project and signed a purchase agreement with the landowner, Merriweather, LLC. The deal protected a huge swath of the Northern Forest north of Moosehead Lake.

The negotiations actually began several years earlier, when Wagner Forest Management, the manager for two large timberland investment management organizations (often called TIMOs), approached the Forest Society of Maine with a proposition to protect the 656,000 acres of the two ownerships. The deal unfurled in two phases. In the first phase, the Forest Society of Maine purchased 4,000 acres around Big Spencer Mountain to maintain as an ecological reserve, donated the property to the state and also helped the state acquire nearly 6 miles of shoreline along Moosehead Lake. The first phase was also intended to include a working forest easement on 67,520 acres, but lingering negotiations delayed and transformed the original deal.

The Forest Society of Maine, working in partnership with the Maine Department of Conservation (DOC), sought public financing from the beginning phases of the transaction. The result was \$19.7 million of federal Forest Legacy money plus a \$1 million grant from the Land for Maine's Future Program (LMF). This significant public investment invited the attention and oversight of various public interests.

The initial design for the working forest easement was based on LMF, DOC, and other state standards and guidelines in place at that time. As the project moved through the process, LMF decided that it wished to change its guidelines to add requirements for sustainable forestry. The board issued its own set of Forest Easement Drafting Guidelines in 2002. At the same time, one or more of the potential private funders, including the Northern Forest Protection Fund, asked for more assurances of sustainable forestry. This required the FSM and DOC to bring the landowner back to the negotiating table, and after several months of discussions, were successful in renegotiating the easement to include terms meeting the state's new sustainable forestry standards.

As the proposal again worked its way through the LMF process, another state entity decided to weigh in. The Maine State Attorney General's office expressed its concern that certain aspects of the state's easement standards regarding public access were not adequate. After several months of debate, a tentative agreement was reached. At this point, the FSM-DOC team returned to the landowner with the news that the state had yet again changed its position and the negotiations would need to be reopened a second time. Although success was achieved in addressing these new standards, the landowner now had little faith in the state's ability to maintain an agreement. At this point the Forest Society of Maine stepped in for the state as the prospective easement holder.

The multiple rounds on negotiations eventually satisfied the parties' interest in protecting public values. But the lack of predictability of working with the state and intense public scrutiny caused one of the partners, Great Northwoods, LLC, to drop out of the deal to reconsider the timing and ramifications of this type of transaction.

With the support of over 300 contributors, including state and federal funding programs, the Forest Society of Maine closed the deal with Merriweather, LLC, in 2003. At 329,000 acres, the West Branch Project is the largest contiguous block of land ever protected in Maine. It includes the West, North, and South branches of the Penobscot River, as well as Baker Lake and some of the St. John River's headwater ponds. A working forest conservation easement held by FSM, covers 282,000 acres. The Maine Department of Conservation acquired 47,000 acres that include recreational lands around Seboomook Lake and the historic Pittston Farm and areas of ecological sensitivity around Baker Lake and the St. John Ponds. In addition, a stewardship fund was created to finance the management of this landmark forest conservation easement. As the first landscape-scale working forest easement in Maine to utilize significant public funds, the West Branch project catalyzed the evolution of state policies and led to the acceptance of publicly funded easements as a viable tool for use in Maine's North Woods.

The deal provides recreational access to the public in a separate easement with the State of Maine. The most important ecologically sensitive areas are protected by full-fee purchase by the state. Other ecologically sensitive areas in the easement lands are identified and protected under the terms of the easement.

How the Land Is Protected: Existing Standards Plus Performance Expectations

The easement protects the land from development, allows commercial forestry, and then uses a variety of approaches to ensure that the forestry practices will be sustainable and protect ecological values. The easement uses a mix of existing standard approaches and reinforces them with performance expectations. General goals are set forth in the easement. They are reinforced and made into specific performance expectations by an initial ecological baseline inventory. The easement instructs the Forest Society of Maine and the landowner to work together to ensure that those performance expectations are met through a series of adaptive management plans.

Examples of existing standards and performance expectations can be found in Appendix 1.

How Well Does the West Branch Easement Ensure that Public Values Are Protected Through Sustainable Forestry?

The West Branch project is an excellent example of how to bring a number of easement design approaches to bear on a very large ownership. Existing standards set the direction and provide a floor for long-term management; then two approaches, the real cornerstones of this easement transaction, come into play.

The first cornerstone is a reliance on comprehensive baseline data to set performance expectations. Baseline data turns weak performance statements into measurable targets. For example, baseline data documents the location of rare, threatened, and endangered plants and animals. The Maine Department of Inland Fisheries and Wildlife provided maps of “Essential Habitat.” A map of bald eagle nesting sites and associated buffer areas, for example, helps the easement holder see if proposed management activity could affect the sites. Similarly, the baseline data includes the current management plan and stocking data for each stand type. The easement holder can use this data to determine if future management activities are designed to maintain stocking levels and provide for sustainable yields. After operations are complete, new data can be compared to the baseline to see if benchmarks have been met.

The second cornerstone is the process for ongoing dialogue and adaptive management. The easement clearly defines the working arrangement between the easement holder and the property owner and establishes a continuous sharing of information, including at least one required annual meeting. It is understood that the management plans will be developed in concert.

The value of such a discussion framework cannot be overstated. It is not always possible, particularly on a large ownership, to prescribe specific practices, but once the parties agree on the general goal of protecting ecological values and produce the baseline information, the management expectations materialize and the adaptive management process has a clear path. Existing standards, such as the practices of professional licensed foresters and third-party certification, provide additional guideposts.

The West Branch does not use the highest level of assurance – the prescriptive approach – in its easement documents. However, it is easy to envision how the adaptive management process could eventually yield a plan with mutually agreed-upon prescriptive practices. There is obviously a risk that an easement’s adaptability will yield undesired results (from the easement holder’s point of view), but, in this case, the design approach greatly reduces that risk. The West Branch project is an excellent example for the next wave of working forest conservation easements, particularly large-scale projects. It is rated a Level Ten for its use of performance expectations.

THE PECK-HULL-NORCROSS EASEMENT & COVENANT

(Level Eleven-Prescribed practices)

A prescribed practice approach on 8,500 acres of Southern New England Forest

The Peck-Hull-Norcross covenant that eventually became part of this important conservation purchase resulted from a distinctive, if not unique, intersection of interested parties. The original owner (Peck) and new owner (Hull) had a long history of ownership and forest management in the locality. The New England Forestry Foundation, which stepped into the role of facilitator and fund-raiser, also had plenty of experience in similar forest types. The Norcross Wildlife Foundation had an interest in the project because of the proximity of some project lands to its Wildlife Sanctuary, Tupper Hill, and its mission to facilitate the conservation of wildlife habitat wherever possible. The Foundation's status as a potential funder significantly strengthened its negotiating position.

The parties took a historical perspective on the management of these lands and the practicality of various silvicultural approaches. Although an easement on 8,500 acres is not a modest one, it is less complicated, and more amenable to a prescribed-practice approach than larger easements. All these factors helped the easement designers to move to a form that offered the highest level of assurance that ecological values will be protected.

The original negotiations on the Peck-Hull Timberland Project began in 1998 when Hull Forest Products of Pomfret, Connecticut, committed to purchase 7,021 acres of forestland from the heirs of the Peck Lumber Company of Massachusetts. Hull sought the assistance of the New England Forestry Foundation to locate funding for the purchase of conservation restrictions on the Peck property. Hull also owned over 1,000 acres in Connecticut and Massachusetts that it was willing to consider as part of the entire conservation easement package.

The Norcross Wildlife Foundation was the first organization to commit funds to the purchase of development rights, followed by the Commonwealth of Massachusetts, the National Fish and Wildlife Foundation and the Frank Stanley Beveridge Foundation. The deal was closed in 2000 with several conservation easements that covered 8,500 acres of non-contiguous parcels variously held by the Massachusetts Division of Fisheries and Wildlife, the Massachusetts Department of Environmental Management, the Springfield Water and Sewer Commission, and the New England Forestry Foundation.

The Norcross Wildlife Foundation's mission is to conserve habitat for both flora and fauna and to actively support the conservation work of non-governmental conservation organizations for the benefit of the public. This includes the collection and propagation of wild plants, the preservation of habitat for all forms of animal life, the conservation

of land and water, and free-of-charge environmental education for elementary school-aged children. In addition to acquiring priority land for its own purposes, Norcross makes grants for tools and technology and operates a first of its kind no-interest loan fund to facilitate the land conservation work of small, local land trusts.

The Norcross reaction to the original working forest easement prepared by New England Forestry Foundation was that wildlife habitat values were insufficiently protected. One of Norcross's principal objectives in the negotiations was to establish higher standards and better mechanisms for conserving wildlife values under a working forest easement. Following several attempts to improve on the original easement, Norcross decided to try something new and developed a set of sustainable forest management guidelines that would satisfy its mission. With minor revisions, Hull agreed to the terms of the sustainable forest management guidelines.

How the Land Is Protected: Prescribing Specific Forestry Practices

A unique set of Sustainable Forest Management Guidelines was developed and applies to all 8,500 acres within the greater project. Each easement permits only "ecologically responsible silvicultural management activities" and requires a forest management plan with clearly defined components. The grantee has the right to approve the plan and the forest management activities.

However, some parcels were of special interest to Norcross. Since Norcross is not the easement holder (that role belongs to the entities listed above), Hull and Norcross entered into a side "agreement and restrictive covenant" (ARC). In return for the Norcross help in funding the easement, Hull agreed to manage 1,200 acres within the larger project under the ARC restrictions in a "manner that fosters sound forestry and wildlife management practices." Norcross also has the right to review and approve forest management plans and certain practices (e.g., harvests, road building, etc.) for these lands. The following analysis concerns the ARC and the lands under its restrictions.

The Peck-Hull-Norcross Covenant uses both the existing standards approach and the tailored-design approach to protect public values. The cornerstone of this agreement is the Sustainable Forest Management Guidelines, attached to the ARC in the form of an appendix. These guidelines prescribe practices that Hull must use to meet its management objectives. This unique combination of working forest conservation easement and side agreement and restrictive covenant provides a high degree of assurance that important values, such as wildlife habitat, will be protected. The ARC and management guidelines facilitate the use of a number of the different assurance levels described above. The following analysis covers the side agreement and restrictive covenant in detail, starting with the weaker assurance levels and moving up to the stronger ones.

Existing standards in the Peck-Hull-Norcross covenant

The initial recitations of the ARC include the phrase “Whereas, Hull...intend(s) that the lands be managed in a manner that fosters sound forestry and wildlife management practices.” This is a Level Two assurance that relies on existing definitions of “sound forestry” and “sound wildlife management practices.” As we noted earlier in this report, these general terms are open to wide interpretation within the forestry community. Without more specifically defined expectations, it is doubtful that the values important to Norcross would be protected by this phrase alone.

Section 1(a) directs Hull to provide Norcross with copies of management plans and annual reports summarizing silvicultural activities. In Section 1(b), Norcross reserves the same right as the New England Forestry Foundation to receive, review, and approve copies of the plans. This section also provides for dispute resolution procedures as set forth in the easement document.

Section 2 calls for a Level Five third-party certification, specifying that Hull “shall utilize Smartwood, a subsidiary of the Forest Stewardship Council.” But Norcross moves beyond the way the West Branch used this assurance level by making it mandatory and by specifying the particular certifier that must be used. Assurance levels vary widely among certification systems, and Norcross chose the one it determined offered the most rigor and was the best match to their desire to protect wildlife values.

Performance goals and prescribed practices in the Peck-Hull-Norcross covenant

The remaining assurances are included in the unique seven-page attachment to the ARC. The Sustainable Forest Management Guidelines are included in their entirety in an appendix to this report, but certain portions of the guidelines deserve mention here.

The intent of the Sustainable Forest Management Guidelines is to define the principles and practices that must be integrated into the forest management plan. The guidelines define terms such as “sustainable forestry” and identify the necessary components of the forest management plan. It does not rely on existing standards or debatable terms for these topics.

For instance, it states the principle that the sustainable forestry will “maintain and enhance the Property’s full range of forest ecosystem values – ecological, social and economic – in perpetuity,” and that harvests will be “ecologically sensitive, socially responsible and silviculturally sound.” But it also makes clear “that sustainable forest management requires that a specified percentage of the forest will always be composed of large sawtimber size trees (i.e., 18” DBH or greater), a majority of which will be classified acceptable growing stock.” This is an example of a prescription that a forester can take into the woods and act upon. It is relevant to the specific timber types and geographical location of the Peck-Hull lands. It instructs the forester to grow and maintain large trees for commercial and ecological purposes.

We also learn that “sustainable forestry” in this context means:

- Maintenance of the full functional value of all components
- Key ecosystem elements are not significantly impacted or eliminated
- Maintenance of biological diversity is the cornerstone
- Conducting natural resource inventories is the first step
- “Wildlife habitat” refers to all vertebrate species known to rely on these forests
- Vegetation plays a key wildlife role
- Understanding the function of wetlands better
- Identifying the public’s aesthetic values
- Silvicultural policies are driven by biodiversity and wildlife habitat as well as timber production
- Unique or fragile areas will be identified and specific measures to protect them implemented

In the Peck-Hull approach, basic agreements on management goals and policy precede the forest management plan, and the plan must include them. The agreements set the parameters for the ongoing dialogue between the manager and the holder of the covenant. Potentially differing points of view or management approaches are resolved. Less room is left for dispute. These agreements also establish the basic composition and direction for the plan.

The major section of the guidelines, “Sustainable Forest Management Practices,” uses a combination of specific performance expectations and prescribed silvicultural practices to obtain the management assurance Norcross was looking for. The full version of the guidelines is replicated in Appendix 2.

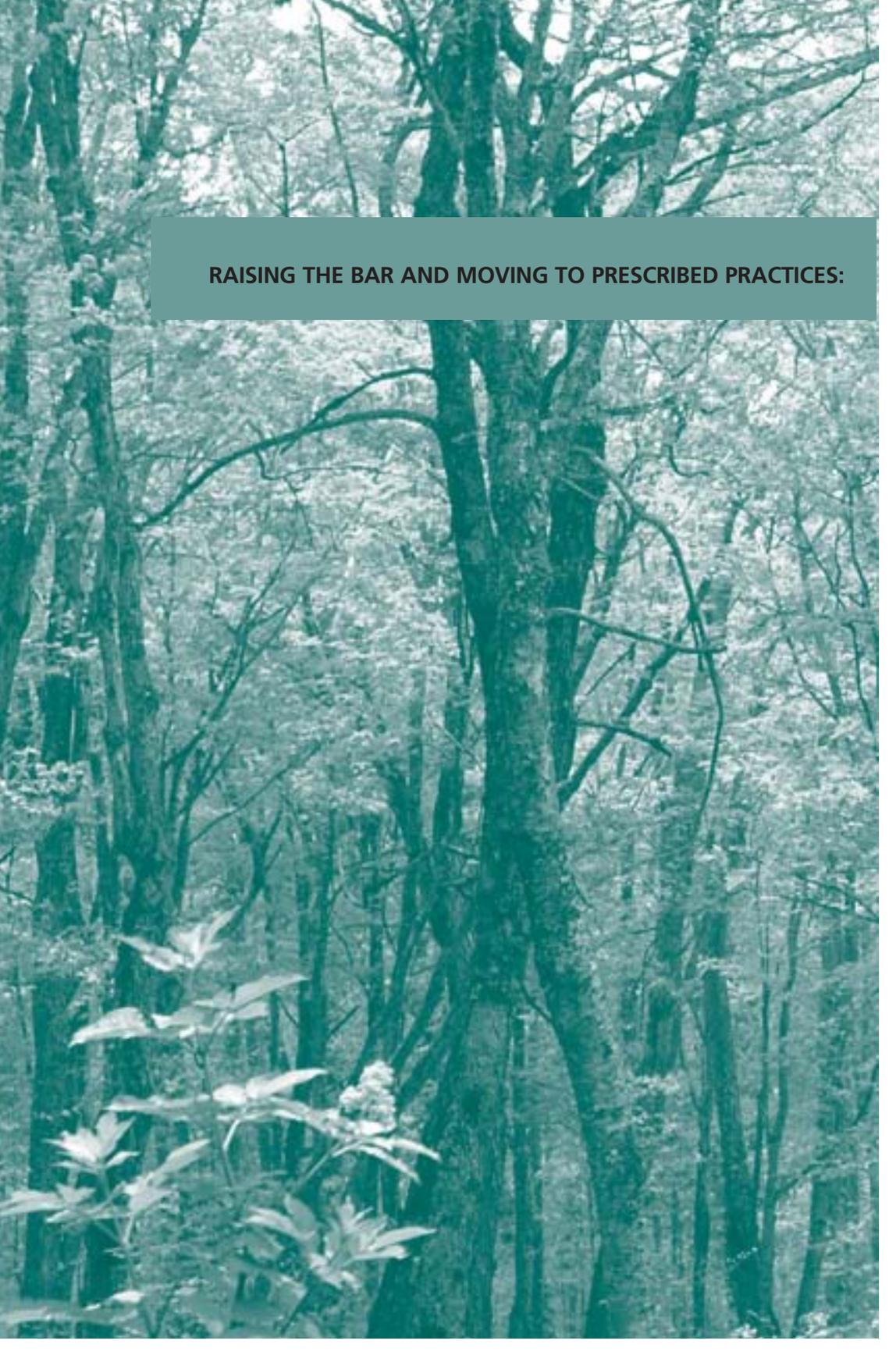
How Well Does the Peck-Hull-Norcross Covenant Ensure that Public Values Are Protected Through Sustainable Forestry?

The covenant language precludes lengthy debate about silvicultural approaches, clearly stating that the selection system is the preferred choice. This is an indication that management should attempt to maintain a continuous mature overstory. The document also clarifies questions about commercial rotation age by providing explicit diameter limits that healthy trees must reach before they may be considered commercially mature. Even the methods for ensuring growth and yield are defined. Norcross was also able to maintain the power to approve management plans, thus further requiring that the parties work together to meet common goals.

The combination of prescriptions ensures consideration of the ecological, social, and cultural aspects of forest management. A continuous uneven-aged forest will be aesthetically pleasing and provide an array of late successional ecological benefits in a sea of private ownerships that are rapidly changing hands without long-term plans. The selection system will also increase the long-term financial returns, reduce the

likelihood of boom-and-bust cycles, and ensure a continuous flow of high-quality products to support local investment in the forest base.

The Peck-Hull-Norcross easement and covenant use the entire range of possible approaches. The use of prescribed practices earns it a rating level of Eleven, the highest of any easement project we have reviewed. This combination of approaches provides the highest assurance of ecological forestry in perpetuity. While this model may not be practical in every project, it provides a target to shoot for and offers an example of what is possible. The full seven-page management guideline document is provided in an appendix to this report.



RAISING THE BAR AND MOVING TO PRESCRIBED PRACTICES:

THE IMPORTANCE OF MANAGEMENT FLEXIBILITY AND THE LANDOWNER/ EASEMENT-HOLDER DIALOGUE

A natural tension exists between the economic goals of commercial forestry and the desire to protect ecological values. Easement transactions should not ignore this tension. If the parties to an easement accept the tension and use the tools presented in this report, it is possible to get both sides to agree on a set of specific prescribed practices.

It is helpful to think of a range of silvicultural techniques, and the foresters who evaluate the appropriateness of these techniques, as the route to resolving the tension. When the easement is under negotiation and the landowner is about to receive a significant payment, the time is right to consider new and better silvicultural practices. The cost basis of the property is dropping and a new chapter in the property's management history is unfolding. Again, at this pivotal juncture, it is helpful to understand the forester's professional perspective as he or she attempts to balance the goals of the owner and easement holder with potential silvicultural practices.

Protection of ecological values depends on sound prescriptions for long-term management. Yet, foresters understandably cringe at the prospect of accepting specific practices in perpetuity. The forest is dynamic – the only constant is change. A single silvicultural practice may not work in every situation. This is where ongoing dialogue between the easement holder and the manager becomes critical: so that the silvicultural prescription itself will be dynamic over time. There should be some procedure for judging the effectiveness of the prescribed practices and, if necessary, adapting them in the revised management plans. Ongoing dialogue will facilitate these changes and build trust. (But just in case, recourse to mediation and arbitration can be part of the original agreement.) In fact, this dialogue, in and of itself, may do more to raise the bar than any specific prescription.

Many foresters find themselves in employment situations where only a narrow range of silvicultural practices could meet landowners' financial objectives. However, if the objectives are altered through the easement negotiations to become more ecologically based, most foresters will eagerly embrace them as a chance to practice the kind of forestry they prefer. However, they don't want to be caught with a set of new ecological prescriptions for meeting the old financial objectives.

Effective easements set up formal arrangements for this dialogue. The parties need to work together to collect and report the baseline data, agree on silvicultural practices, and formulate the harvest rates. Progressive easements, as these agreements are called, also set up a learning process for foresters and land trusts. The parties can recruit experts to advise on endangered species, non-game species, or invasive plants; advisory boards of trusted experts can be established to guide the learning process. With the proper funding and direction, most foresters will be excited about increasing their skill sets and integrating new ideas into their management.

The easement documents or management plan cannot be expected to cover every eventuality or provide the last measure of assurance. Pushing for too prescriptive an approach could sink the deal or lock the managers into an economically and ecologically detrimental situation. An adaptable planning process, together with ongoing dialogue, good data and expert help will guide the project to success.

CONCLUSION

Working forest conservation easements continue to evolve. Designers are using a wide variety of approaches, mixing and matching in different ways to achieve higher levels of assurance that ecological and other public values will be protected. The public has a financial investment in these easements, and its interests should be protected.

Each easement transaction is unique and must be evaluated in its particular context. Each of the three easements discussed in this report responded to a unique set of circumstances. Different circumstances will dictate the negotiations around new easements, and we hope the examples provided here will help deal makers design their easements to ensure that the public will realize the benefits of sustainable, ecologically-based forestry.

We hope this analysis demonstrates what is possible and moves the bar higher. Each member of the Forest Guild is committed to practicing sustainable, ecological forestry on all the lands we manage, whether under an easement or not. Our ethic binds us to “disassociate” from a project if this goal cannot be reached. We believe protection of ecological values and the continued support of local economies should be the basis of all forestry – whether it is called “sustainable” or “ecological” or something else.

The Forest Guild’s policy on easements is that all easements should provide the highest possible level of assurance that forest practices will be sustainable and protect ecological values. We believe that the public has a significant investment in easement transactions and it is the responsibility of the easement designers to produce contracts that protect public values as well as provide the opportunity for forest landowners to manage their forestland profitably. Finally, we see foresters as a vital link in these design efforts and welcome the opportunity to work with land trusts, governmental agencies, landowners and our forestry colleagues to design the most effective easements possible.



Appendices:

Appendix 1. West Branch Easement Excerpts:

Examples of existing standards and performance expectations.

Existing standards for the West Branch¹¹

The following *existing standards* were used to ensure sustainable forestry:

- Section 4.1 Forest management activities shall include...***silvicultural treatments***.
- Section 4.2 Forest management activities shall be conducted in accordance with applicable ***local, state and federal laws and regulations*** at the time such activities occur.
- Section 4.1 Forest management activities shall include...applying in accordance with applicable ***statutes and regulations*** herbicides, pesticides, fungicides, rodenticides, insecticides and fertilizers.
- Section 4.3 Forest management activities shall be conducted in accordance with a written plan (the ***Forest Management Plan***).
- Section 4.3 (i) The Forest Management Plan shall be prepared by one or more professional foresters (a “professional forester” shall be defined, for purposes of this Easement, as a ***licensed forester in the State of Maine*** who shall attest by notarized signature that the Forest Management Plan is consistent with the terms and Purpose of the Easement).
- Section 4.3 (v) The Forest Management Plan shall...be...in compliance with ***Best Management Practices*** (BMPs) outlined in [Erosion & Sediment Control Handbook for Maine Timber Harvesting Operation Best Management Practices](#).
- Section 4.3 (vi) The Forest Management Plan shall: ...comply with the ***Loon Nest Lakes and Nest Site Management Standards***.
- Section 4.4 ***Third-Party Certification*** of Sustainable Forest Management...approved by the Grantee...shall be deemed in compliance with all provisions of Section 4.3. The Grantee must request approval of the third party.
- Section 24 Baseline Documentation. The original baseline documentation is on file at the offices of the Grantee....The baseline documentation is intended to serve as an objective, although not exclusive, information baseline for monitoring compliance with the terms of this Easement.

Performance expectations for the West Branch

The following performance expectations are set in the West Branch easement:

- Section 4.3 Forest Management Activities shall...set forth...the management of the property as ***productive timberland***.
- Section 4.3 The Forest Management Plan shall identify the ***silvicultural strategies and harvesting approaches***.

¹¹ This list and the lists that follow in the West Branch discussion reproduce, in condensed form, the language of the actual easement.

- Section 4.3 The Forest Management Plan shall...perpetuate...the ability to **produce forest products, including a projection of timber harvest and growth.**
- Section 4.3 (iv) ...Grantor shall provide a narrative account of the **anticipated condition and composition of the forest** and...the long-term ability to produce forest products.
- Section 4.3 (vi) ...**protect** known site-specific occurrences of **animal species that are listed ...as endangered or threatened.**
- Section 4.3 (vi)...**protect** known site-specific occurrences of **plant species that are listed as endangered or threatened.**
- Section 4.3 (vi) **manage appropriately** the known site-specific occurrences of **animal species ...listed...as "special concern."**
- Section 4.3 (vi) **manage appropriately** the known site-specific occurrences of **plant species...listed...as "special concern."**
- Section 4.3 (vi) **manage appropriately** the **unique and exemplary natural communities and natural areas** documented by state agencies.
- Section 4.3 (vii) **manage appropriately** the designated **Essential Habitat...significant wildlife habitats** identified and regulated by the state agencies...**fish and wildlife resources.**

Key points of dialogue between easement holder and owner

- Section 4.5.1 The Grantor...within 12 months...shall provide...a Forest Management Plan satisfying the requirements of Section 4.3.
- Section 4.5.1 Grantor is neither entitled nor required to approve the Forest Management Plan.
- Section 4.5.3 The Grantor and Grantee shall meet no less often than annually...to share information for the purposes of monitoring the easement...and discuss any questions or concerns.
- Section 4.5.3 Either party may convene up to four meetings each year.
- Section 4.5.4 Within thirty days after each annual meeting...the Grantee shall prepare and provide to the Grantor a summary written report.

Flexibility through mediation and arbitration, and how to incorporate new technology

- Section 7.3 If the parties disagree...and are unable to resolve such disagreement...either party may refer the dispute to mediation.
- Section 7.4 In the event the Grantee and Grantor fail to resolve their disagreement through mediation then the Grantee or Grantor may request arbitration pursuant to the Commercial Arbitration Rules of the American Arbitration Association.
- Section 3.1.3 The parties acknowledge that, as technologies evolve...methods may emerge which would be suitable on the property. The Grantor reserves the right to carry out such activities that are in the Grantee's reasonable judgment not inconsistent with the purpose of this easement.

Appendix 2: Hull-Peck-Norcross Guidelines for Sustainable Forest Management Practices

SUSTAINABLE FOREST MANAGEMENT GUIDELINES

These guidelines are intended to clearly define the forest management principles and practices to be integrated into the property's Forest Management Plan. They are the foundation upon which the success of the Sustainable Forest Management Program depends, assuring that the respective missions of Grantor and Grantee are satisfied.

For the purposes of this Grant of Conservation Restriction, sustainable forest management is defined as the adoption of specified principles and the implementation of specified practices that tend to maintain and enhance the Property's full range of forest ecosystem values - ecological, social and economic - in perpetuity.

Sustainable forest management of the property will emphasize maintaining biological diversity, enhancing the wildlife habitat values of the forest community as a whole, and regulating the harvest of wood products so that harvest levels do not exceed the growth and yield capacity of the forest. Sustainable timber production is a compatible and integral element of sustainable forest management and requires the efficient utilization of the productive capacity of the forest. The harvest and utilization of wood products will be conducted in a manner that is ecologically sensitive, socially responsible and silviculturally sound. It is understood that sustainable forest management requires that a specified percentage of the forest will always be composed of large-sawtimber size trees (i.e. 18" DBH or greater), a majority of which will be classified acceptable growing stock.

The major objective of this sustainable forest management program is to maintain the integrity of the forest ecosystem in perpetuity. The parties recognize that their understanding of forest ecosystems and how they function is incomplete. It is imperative that relevant advances in scientific knowledge be periodically incorporated into the sustainable forest management program. At the present time the parties feel it is sufficient to identify certain goals through which they hope to achieve the major objective of perpetual forest ecosystem integrity. The specified program goals are:

1. Preserve biological diversity;
2. Maintain and enhance wildlife habitat values for the benefit of those species of mammals, birds, fish, amphibians, and reptiles known to find suitable habitat in the transition hardwood forests of Southern New England;
3. Preserve and protect the functional values of wetlands and watercourses;
4. Utilize silvicultural strategies that secure the long-term, sustainable production of wood products;

5. Preserve aesthetic values and scenic qualities;
6. Identify unique or fragile natural areas and establish guidelines for their preservation;
7. Identify cultural resources and establish guidelines for their protection;
8. Manage the Property in a manner that results in the tangible production of multiple outcomes: sustained wildlife habitat values, consistent or enhanced soil productivity, clean water, fully functioning wetlands, watercourses, and riparian zones, scenic quality, and the sustainable harvest of trees for commercial lumber production.

Foresters must be guided by a set of principles that embrace the sustainable forest management program goals and objectives and translates them into appropriate practices. Maintaining the full functional values of all the component parts of the forest community, or forest ecosystem maintenance, is the foundation of sustainable forest management. Implementation of sustainable forest management must not eliminate or significantly impact any of these key ecosystem element. Certain measurable criteria can be used to determine the effects of management on the forest ecosystem. These criteria include, but are not limited to, biological diversity of flora and fauna, forest community structure and species composition, biological reserves and legacies, wetland and watercourse functional values and wildlife habitat values.

1. Maintenance of biological diversity is a cornerstone of the sustainable forest management program and a key factor in achieving the objective of enhanced wildlife habitat values. A first step in maintaining biological diversity requires the conduct of natural resource inventories that strive to identify and evaluate the relative value of the full range of plant and animal resources present on the Property.
2. Wildlife habitat values refers to all of the vertebrate species (i.e. mammals, birds, fish, amphibians and reptiles) known to rely on the transition forests of this region in addition to non-forest habitats for a variety of needs that must be fulfilled if they are to live and reproduce. These needs are expressed as specific habitat requirements for food, cover, water and space. Vegetation plays a key role in satisfying these needs. The habitat value of vegetation is related to it's age, maturity and seed and/or fruit-bearing status, diversity among species, diversity of age groups within species, interspersion with water resources, and interspersion among vegetation types.
3. Protecting the functional values of wetlands and watercourses begins by developing a better understanding of the type, condition and function of these important resource areas. Wetlands represent some of the most ecologically productive communities of flora and fauna. They play a critical role in the landscape-level functioning of forested ecosystems. Certain functions such as flood control, groundwater recharge, base flow discharge, nutrient retention and sediment

trapping are extremely important to society. One of the most important functions of wetlands is wildlife habitat.

4. The public's perspective of aesthetic values and scenic qualities is important and will be identified early in the process of Forest Management Plan development. Specific measures to protect them must be an integral part of Plan implementation. In the event that the maintenance of aesthetic values or scenic qualities conflicts with wildlife habitat enhancement or wetland function protection, habitat or wetland protection will be given a higher priority.
5. Silvicultural policies must be driven by the primary goals of maintaining biological diversity, securing wildlife habitat values, and establishing and maintaining sustainable timber production.
6. Unique or fragile natural areas will be identified early in the process of Forest Management Plan development. Specific measures to protect them must be integrated into plan implementation. Government agencies responsible for monitoring rare, threatened, endangered, or special concern species are valuable partners in this effort and may help identify places for natural area designation.
7. Cultural resources will be identified early in the process of Forest Management Plan development. Specific measures to protect them must be integrated into plan implementation.
8. Assuring the tangible production of multiple outcomes requires the periodic evaluation (e.g. ten-year intervals) of wildlife habitat, soil productivity, surface water, wetlands, watercourses, riparian zones, scenic qualities and wood products.

SUSTAINABLE FOREST MANAGEMENT PRACTICES

As the foundation of the sustainable forest management program, Grantor will maintain and, whenever possible, enhance forest ecosystem values. This will include, but is not necessarily limited to, the following actions:

I. Biological Diversity of Flora and Fauna

As a cornerstone of the sustainable forest management program, Grantor will maintain and, whenever possible, enhance the biological diversity of the forest ecosystem. This will include, but is not necessarily limited to, the following actions:

1. Identify and list all woody plant species present on the Property at the time of initial Forest Management Plan development. Include a separate list of those species considered to be non-native plants with invasive tendencies.

2. Encourage government agencies or private organizations with expertise in non-woody plants to visit the Property and, if possible, compile lists of herbaceous plants present. Include a separate list of those species considered to be non-native plants with invasive tendencies.
3. Maintain a representative population of the native tree and shrub species that are present at the time the Grantor takes title to the Property, with the exception of pioneer or early-seral species that are in a significant state of decline;
4. Implement measures to control the spread of non-native plants with invasive tendencies, including the use of mechanical and chemical means (e.g. topical stump applications of approved herbicides);
5. Design and execute silvicultural practices that establish and sustain an uneven-aged forest that is indicative of the Selection System of silviculture. It is understood that the use of the Shelterwood Method of reproduction (or other methods) may be needed to initially establish or maintain the variety of age and size classes that are indicative of the Selection System.
6. Maintain and update a list of vertebrate species that are directly observed on-site or for which audible or visible evidence of their presence is observed;
7. Encourage government agencies or private organizations with expertise in various wildlife specialties (e.g. Massachusetts Audubon Society, University of Massachusetts, etc.) to visit the Property and, if possible, prepare a list of species for which suitable habitat exists on the Property;
8. Identify those wildlife species known to occur on or near the Property whose presence is considered noteworthy due to their state or federal status as rare, threatened, endangered, and/or special concern species.

II Wildlife Habitat Management

Grantor will maintain and enhance overall wildlife habitat values and certain individual habitat elements specific to the Property. It is understood that a majority of the Property may be occupied by forest cover of varying maturity and the existing habitat values may favor management for species attracted to late-seral types of habitat. Habitat maintenance and enhancement will include, but not necessarily be limited to, the following actions:

1. Identify and assess in the Forest Management Plan, at the stand or management unit level, the presence, relative value, and adequacy of existing sources of food, cover, water, and space for those species known to occur, or likely to occur, in the specified area.

2. Identify and assess in the Forest Management Plan, at the stand or management unit level, the presence, relative value, and adequacy of existing habitat elements such as vernal pools, groundwater seeps, mast-producing stands of trees, areas of non-forest vegetation, alder or aspen groves, den trees and snags, etc. Depict on the Forest Management Plan map, at the stand or management unit level, these significant habitat elements.
3. Specify in the Forest Management Plan, at the stand or management unit level, practices designed to maintain existing habitat values.
4. Specify in the Forest Management Plan practices designed to maintain or enhance early-seral habitat areas.
5. If rare, threatened, endangered, or special concern species are known to occur on or near the Property, specify the measures that will be taken to ensure that suitable habitat conditions are maintained for their benefit.
6. Specify in the Forest Management Plan, at the stand or management unit level, best management practices to be employed in order to protect the water quality and habitat functions of wetlands, watercourses or vernal pools during the conduct of commercial harvests.

III Wetland Management

Grantor will maintain wetland functional values specific to the Property. This will include, but is not necessarily limited to, the following actions:

1. Identify and assess in the Forest Management Plan, at the stand or management unit level, the type and significant functional values of wetlands and watercourses, and any existing conditions that tend to have a detrimental effect on their function.
2. Depict on the Forest Management Plan map, at the stand or management unit level, wetlands and watercourses.
3. Specify in the Forest Management Plan, at the stand or management unit level, best management practices to be employed in order to protect the water quality and functional values of wetlands and watercourses.

VI Aesthetic Values and Scenic Qualities

Grantor will maintain aesthetic values and scenic qualities specific to the Property. This will include, but is not necessarily limited to, the following actions:

1. Identify and assess in the Forest Management Plan, at the stand or management unit level, the presence of scenic areas and aesthetic resources;
2. Depict on the Forest Management Plan map, at the stand or management unit level, areas of scenic or aesthetic resources;
3. Specify in the Forest Management Plan, at the stand or management unit level, practices to be employed or visual buffers to be maintained, in order to preserve areas of scenic or aesthetic value.

V Silviculture Policies

Timber production must be compatible with the maintenance of non-timber forest values including overall ecosystem function, biological diversity, wildlife habitat, water quality and aesthetics.

1. The silvicultural system to be employed in the management of the Property will be the Selection System. The principal intent is to encourage the continuous establishment of natural reproduction while creating and maintaining an uneven-aged forest composed of at least three distinct age classes of trees.
2. The Selection Method will be utilized to regenerate stands of trees on the Property. Small-group selection thinnings will likely be required to meet objectives for the reproduction of certain shade-intolerant tree species. It is understood that the use of the Shelterwood Method of reproduction (or other methods) may be needed to initially establish or maintain the variety of age and size classes that are indicative of the Selection System.
3. The Volume Method of Regulation will be utilized to ensure a reasonably sustained yield of harvestable volume and value for lumber production. Harvest levels must not exceed average annual growth, plus a percentage of total growth to account for reserves and legacies. Actual harvests must comply with the regulation strategy, which must be based on achievable yield estimates. The regulation strategy must be flexible and conservative enough to absorb the impacts of market disruptions or catastrophic events that could prevent its achievement such as insect or disease outbreaks or fires.
4. Silviculture and harvest strategies must maintain forest stands in a fully stocked and productive condition. They must assure that predicted yields assumed in the regulation strategy are being met by individual stand treatments. The silviculture strategy will maintain the original diversity of natural forests in both species richness and structure. Up-to-date, scientifically based silvicultural practices will be used and prescriptions will be tailored to individual stand conditions.

5. Due to wide variation in site characteristics and quality the definition of a universal rotation age for the Property as a whole is impractical. However, it is the Grantor's intent to allow trees to reach a size of 18" – 24" DBH before considering them commercially mature.
6. Pesticides will be used only as a last resort. Herbicides will be used only when necessary, such as in the process of controlling non-native plants with invasive tendencies. In all cases the use of herbicides or pesticides will be conducted in compliance with all local, state and federal laws and regulations.
7. Clearcutting, defined as the removal of all trees in an area of one acre or more, may be employed only for one or more of the following purposes:
 - a. Removal of poor quality, intolerant, understocked, short-lived or residual over stories where the retention of the overstory trees is not justified for the purposes of increasing value, as a source of seed, or for protection of the new stand.
 - b. Ecologically appropriate improvement or creation of wildlife habitat.
 - c. Plantation harvest.
 - d. Salvaging marketable trees damaged or destroyed during a fire or storm event.
 - e. In the event that it is needed to control an insect or disease outbreak.

VI Cultural Resources Protection

The Grantor will take measures to protect cultural resources present on the Property. This will include, but not necessarily be limited to, the following actions:

1. Identify and assess cultural resources in the Forest Management Plan.
2. Depict cultural resources on the Forest Management Plan map.
3. Specify in the Forest Management Plan practices to be employed to preserve cultural resources.

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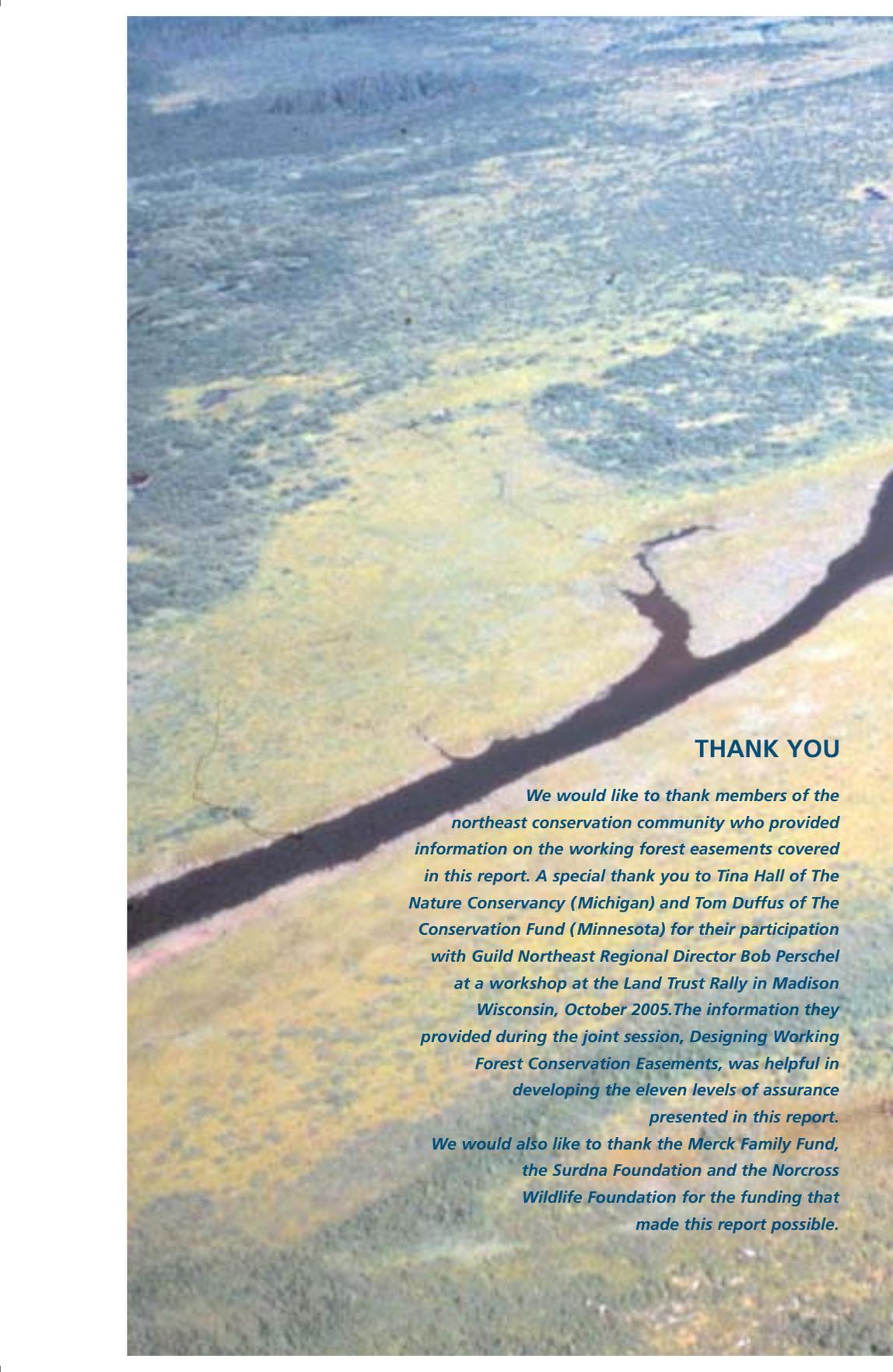
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An aerial photograph of a forest landscape. A prominent, dark, winding stream or path cuts through the terrain, which is covered in dense, green and yellowish vegetation. The stream flows from the upper right towards the lower left, with several smaller tributaries branching off. The overall scene is a natural, undisturbed forest environment.

THANK YOU

We would like to thank members of the northeast conservation community who provided information on the working forest easements covered in this report. A special thank you to Tina Hall of The Nature Conservancy (Michigan) and Tom Duffus of The Conservation Fund (Minnesota) for their participation with Guild Northeast Regional Director Bob Perschel at a workshop at the Land Trust Rally in Madison Wisconsin, October 2005. The information they provided during the joint session, Designing Working Forest Conservation Easements, was helpful in developing the eleven levels of assurance presented in this report. We would also like to thank the Merck Family Fund, the Surdna Foundation and the Norcross Wildlife Foundation for the funding that made this report possible.



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