

STEWARDSHIP PLANNING ON CONSERVATION EASEMENTS IN THE
FOREST LEGACY PROGRAM

by

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Stewardship plans have great potential to preserve and strengthen the values which conservation easements seek to protect. Plans allow easement holders and land managers to adapt to changing conditions and priorities. Yet little is understood about how land managers experience the process of stewardship planning and whether creating a stewardship plan affects forest management practices. Based on qualitative interviews with land managers affiliated with 19 Forest Legacy Program-funded conservation easements in New Hampshire, this study explores land owner/manager experiences with planning and seeks to determine the degree of influence such plans bear on forest management practices. A number of challenges were experienced by respondents in creating plans, particularly surrounding natural resource inventory data and public access. Plans and related activities were found to be more likely to bear influence on the forest

management practices of nonprofit, municipal and private non-industrial owners than on forest practices of professional timber managers.

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CHAPTER I

INTRODUCTION

The purpose of this research was to evaluate land owner/manager experiences with stewardship plans on forest property under conservation easements owned by state and federal governments and funded by the USDA Forest Service Forest Legacy Program (FLP) in New Hampshire. There has been much concern over the effectiveness of conservation easements and in particular, their viability over time is questionable. Perhaps owing to their complex nature and lack of uniformity, few studies have been conducted which evaluate outcomes of conservation easements. Further, the bulk of literature on conservation easements focuses on privately-owned (often by land trusts) easements; little attention has been paid to publicly-owned conservation easements. Stewardship plans are required components of conservation easements funded by the FLP and the plans presumably strengthen conservation values which easements seek to protect; yet little is known about how landowners experience the process of forming these plans and whether planning affects landowner choices regarding forest management practices. The FLP is a national program that reaches nearly every state and stands to be a model for how local and state governments might engage in conservation easement ownership and maintenance. This study contributes to the fields of natural resource policy and management by evaluating a key component of the program (stewardship planning) and can thereby help strengthen this model for a publicly-owned conservation easement program.

Background and Literature Review

By the late 1980s, it was clear that private forestland in New England was disappearing at an alarming rate. After Diamond International, a wood products company, announced that it was selling off more than a million acres of forestland in Maine, New York, Vermont and New Hampshire, congress reacted by authorizing the US Forest Service to conduct the Northern Forest Land Study to recommend prospective solutions to the problem (Beliveau 1993). Out of this effort, the 1990 Farm Bill introduced the Forest Legacy Program (FLP) to use purchase of land (aka fee simple acquisition) and conservation easements to prevent the liquidation of timber stocks and the conversion of forestland to non-forest land uses. Conservation easements, also known as the purchase of selected rights (often development rights), are based on the idea that land ownership entails the ownership of a bundle of rights that may be separated and sold (Bengston et al. 2004). Conservation easements funded under this program must include separate document called a forest stewardship plan to help private landowners manage their land in concert with both the goals of the FLP and the terms of the easement. Private and public dollars are spent crafting forest stewardship plans with the expectation that landowners will accomplish more and better forest management after they complete a plan. This assumption seems reasonable enough as there has been some evidence to support the notion that stewardship planning as a policy produces better conservation outcomes than not planning (Baughman and Updegraff 2001, Egan et al. 2001, Byers and Ponte 2005). By examining the experiences of owners of forests under

FLP-funded easements in New Hampshire, forest stewardship plans¹ will be explored in this paper as a component of a conservation easement program.

Although other public program and policies existed prior to the FLP that provided assistance or incentive to promote productive and ecologically sound forest management practices on private land (Cubbage et. al 1993), the FLP further escalated the federal government's, and ultimately state and local governments', move toward embracing stewardship planning as a standard policy for managing public interests in private land. In her study of New England working forest conservation easements², Boelhower (1995) stated that New Hampshire seldom required a written management plan and found that only 40% of working forest conservation easement landowners consulted a professional forester prior to timber harvesting. While a national survey of nonindustrial private forestland owners (Birch 1996) revealed that just 5% had a management plan, Birch noted that increased public influence on the management of private land through the use of written forest plans was evident at the time of that study and has been documented in further studies. Cervantes (2001) found 14% of their sample of non-industrial private forestland owners in Minnesota had forest stewardship plans.

Mortimer et al. (2007) completed an important step toward understanding stewardship planning trends on both publicly and privately owned conservation easements. Their

¹ Please note that *stewardship plan* is used interchangeably with *management plan* since the easement program of focus in this paper requires a plan regardless of ownership type; however, a stewardship plan is generally created for use on non-industrial private forest (NIPF) land and a multi-resource management plan for use on industrial timberland.

² Working forest conservation easements (WFCEs) are easements on forest properties that are being managed for the production of some forest product.

survey of 3,598 easements owned by 355 conservation organizations and 16 state agencies throughout the United States shed light on the common components of traditional conservation easements and working forest conservation easements (WFCE), or those being managed for the production of some forest product. The study revealed that government agencies were more likely than private organizations to require some form of stewardship or management plan on both non-working forest easements (50%, 33%) and WFCEs (69%, 62%). [See table #1]. Although Mortimer et al. found differences in stewardship planning trends between WFCE and non-WFCE landowners and between government and private nonprofit easement holders, much fewer government agencies were included in their sample. Regardless, these statistics illustrate that although stewardship planning is growing, it is still absent from a substantial portion of easements surveyed.

Table 1: Mortimer et al. (2007), Respondents requiring a forest stewardship or management plan

Requirement Category	Organizations with		Agencies with	
	Non-WFCE (n=115) (%)	WFCE (n=240) (%)	Non-WFCE (n=2) (%)	WFCE (n=16) (%)
Required	33	62	50	69
Not Applicable	3	0	0	0
No Response	2	1	0	0

Mortimer et al. (2007) further recommend that both agencies and organizations step up stewardship planning efforts as part of the easement drafting process. They recommend planning prior to closing the easement so that landowner management goals are clear and there is direction on how to accomplish those goals. The following passage highlights this and other important features of stewardship plans:

Landowners considering an easement ...should prioritize the planning process, with particular attention to whether stewardship restrictions are better placed in the conservation easement document or in an accompanying management plan. Often, decisions restricting forest management are better left for professional foresters to decide upon based on the property's characteristics [which stewardship planning typically entails]. A management plan can evolve with scientific and technological changes in forest management more readily than the permanent easement document, which typically requires extreme legal measures to amend. Mortimer et al. 2007, Pg. 43.

There is generally a balance to be struck between that which is restricted in the easement and that which is reserved for inclusion in a management plan (Mortimer et al. 2007; Huff 2004). In this way, plans provide a flexible alternative to permanently restricting activities as part of a conservation easement.

Conservation Easements

Conservation easements are growing more popular as a conservation tool used by state and local governments throughout the United States (LTA 2005). Legal basis for conservation easements stems from common law provisions that were first applied in the US in the 1890s. However, conservation easements were not widely used until the 1930s in federal efforts to preserve green spaces adjacent to highways (Wright 1993). A conservation easement is a legally-binding document that constitutes a restriction placed on a piece of property to protect its associated resources in perpetuity (Byers 2005). The easement is either voluntarily donated or sold by the landowner to a party that upon

receipt of the easement, owns an interest in the land while the owner retains the property title. The donation or sale of a conservation easement may offer financial rewards for the landowner, possibly including property or income tax reductions, but can also in many cases reduce the market value of property (Crehan et al. 2005). Easements can be used by public agencies to purchase interests in private property to secure farmland, open space, wildlife habitat, erodible soil, and wetlands among other potential interests (Weibe et al. 1997). Given the relatively recent proliferation of easements as a conservation tool used by public agencies and the value these agreements stand to contribute to public policy, substantive data on how publicly-held easements are structured and managed over time is just beginning to emerge.

In an exploratory analysis of legal and economic issues surrounding conservation easements, both privately-held and publicly-held, Boyd et al. (1999) observed a tendency for government agencies to pay more for easements than their nonprofit counterparts. They state that this phenomenon may be associated with government procurement structures, lack of a market (i.e. government is only buyer) and the fact that private nonprofits more often receive easements as tax-deductible donations rather than purchase them. Pidot (2005) argued that because virtually every conservation easement involves significant public subsidy (be it via use of public funds for purchase or forgone revenue through issuing tax credit), the public should be concerned with whether these transactions are being applied efficiently to ensure a long-term public benefit. Pidot also pointed out that the price of easement purchase does not reflect the true cost of easement. Costs associated with monitoring, enforcement and defense (if challenged) over time

need to be considered. He further suggests that as easement purchase price approaches fee simple acquisition price, the easement may actually be more expensive since it poses a liability over time, thus underscoring the importance of planning carefully when employing easements as a conservation tool.

A 1999 study conducted by The Bay Area Open Space Council surveyed public and private easement holders in the San Francisco Bay Area on easement structure, monitoring and enforcement. The report showed surprisingly low monitoring rates (51%) and relatively high violation rates (14%). Further, the study found that 40% of Bay Area easements did not have baseline documentation (the basis for drafting a stewardship plan) and “(m)any organizations did not include stewardship as a factor in accepting an easement,” (Bay Area Open Space Council 1999, 16). This study and other sources in the land trust community views stewardship as a component of monitoring, not necessarily something that is formalized in a plan. The Land Trust Alliance includes budgeting for stewardship in their Standards and Practices³, but doesn’t go so far as so explicitly recommend a plan (LTA 2007).

Stewardship Planning

Previous literature suggests that forest management plans do impact management practices. In their survey of more than 3,000 landowners in 6 northern states that had obtained a management plan in the 90’s, Baughman and Updegraff (2001) found that

³ “The Land Trust Standards and Practices are guidelines for the responsible operation of a land trust, which is run legally, ethically, and in the public interest and conducts a sound program of land transactions and stewardship.” LTA Standards and Practices, <http://www.lta.org/sp/index.html>. Accessed April 2008.

landowners engaged in more management activities after they implemented a plan than before. However, the quality of the additional management activity is unclear.

Egan et al. (2001) defined actual implementation of the stewardship plan, rather than simply creation of the plan, as the best measure for success of the Forest Stewardship Program in West Virginia. Among other research objectives, they sought to describe the level of landowner satisfaction with both the process and outcomes of the plan. Their study revealed a strong association between whether a forestry activity was recommended in a plan and whether it was implemented on the landscape (Egan, et al. 2001). They also found that there was no significant difference in landowner satisfaction between those who paid for their stewardship plans and those who did not pay (and presumably received public subsidy for the creation of their plan). Although only 10-12 percent of landowners were dissatisfied with their plans, Egan et al. noted that “reasons for dissatisfaction with the program reflected a need for (1) more support for the West Virginia Division of Forestry in order to facilitate more frequent contacts with landowners, and (2) increased funding for the implementation of noncommercial forest stewardship activities,” (Egan et al. 2001, 35). Private landowners are likely to appreciate stewardship planning to assist them with land management goals other than timber harvesting.

Private ownership accounts for 57 percent of total forestland and 71 percent of timberland in the United States⁴ (Smith et al. 2004). Conservation easements provide

⁴ Although assessment of forestland is sometimes contentious (often chaparral or other low-quality forest are included), timberland is defined as “forestland that is producing or is capable of producing crops of

governments with a flexible alternative to achieve conservation goals on these lands without resorting to regulation, fee simple purchase or condemnation (also known as eminent domain) (Mortimer 2004). Merenlender et al. (2004) pointed out, the wide range of properties, individuals, organizations, and institutions involved in conservation easements pose formidable challenges to monitoring and the evaluation of outcomes. Management plans, like conservation easements, are as unique as the property and parties involved, and encourage stability in a climate of ever-changing priorities and interests.

Stewardship planning has great potential to strengthen conservation easements. Chief among concerns regarding conservation easements is the questionable value of land in perpetuity. While stewardship planning won't address some concerns external to the easement property (such as changes in adjacent land use and possible future legal challenges), it can help ensure that the property retains conservation value over time that the lack of stewardship might exacerbate. Stewardship planning may also help prevent landowners from violating the terms of the conservation easement. Since plans are updated periodically, formalize landowner management objectives and recommend best practices for achieving those objectives within the legal boundaries of the easement, stewardship planning may help keep present and future landowners from unintentionally violating their easements.

Stewardship plans are generally private documents since they contain potentially sensitive information regarding the resources held on private property. Industrial

industrial wood and not withdrawn from timber utilization by statute or administrative regulation," (Smith et. al., 2002, p. 17).

landowners in particular are sensitive about the content of their stewardship plans, or rather management plans, as they consider the information to be proprietary. On all funded conservation easements, Forest Legacy Program guidelines call for development of a stewardship plan for NIPF owners or multi-resource forest management plan (management plan) for industrial forestland owners. In the case of New Hampshire, the difference between the two plans is largely semantic since the state requires the same standards for all and all plans address forest management. The actors involved in crafting and monitoring of stewardship plans generally include FLP officials and state forestry officials, private foresters, nonprofit organizations, the land owners, the US taxpayers (who foot the bill), and the US Congress, which enacted the program and approves annual appropriations.

In addition to conveying interests in land to achieve the purposes of the FLP, landowners fulfill their voluntary participation in the program by drafting either a forest stewardship plan or multi-resource management plan. These plans essentially outline the manner in which landowners will exercise reserved rights. Plans may change over time to adapt to landowner objectives, but may never undermine the values protected by the conservation easement. Typically language in a conservation easement calls for a stewardship or multi-resource management plan to cover a period of ten years. FLP guidelines call for a review after a change in ownership of the property. It is quite possible that a change in landowner objectives could take place without a change in ownership. Modifications to a plan must be agreed upon by the state lead agency. Both the land owner and state forester (or designee) must agree to the terms of the plan prior to

signing the easement. The literature tends to promote this last detail as a best practice (Boelhower 1995, Lind 2001).

Another commonly accepted best practice (Byers and Ponte 2005) and requirement of FLP is that visual inspection of easement properties and accompanying report of findings should occur not less than annually. Upon discovery of “any material departure from the baseline documentation report (documentation upon which easements are based) or forest stewardship plan,” landowners should be given notice and a “reasonable time period” to correct the breach (FLP Guidelines for Implementation, pg. 20). These are the minimum standards of FLP easements and associated stewardship plans; easement and plan terms may exceed these standards and often do.

Forest Legacy Program

The USDA Forest Legacy Program (FLP) is a federal initiative aimed primarily at supporting state efforts to prevent forest conversion to non-forest uses throughout the United States (Best and Wayburn 2001). Other goals of the program include preserving water quality, habitat, and recreation opportunities among other public benefits, but preserving “working forests” is the common thread that all FLP projects share⁵. Since 1992, the FLP has protected 1,579,348 acres in 37 States⁶. The two tools allowed under this program for achieving these goals are land acquisition (fee simple purchase) or conservation easement. In the case of FLP, all fee simple titles and easements must be

⁵ <http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml> Accessed March 2008.

⁶ http://www.fs.fed.us/spf/coop/programs/loa/flp_projects.shtml “Acres Protected as of 2/5/08.” Accessed April 2008.

held (owned) by either a local, state or federal government entity. In the case of conservation easement, this creates an arrangement whereby the government owns an interest in private property.

Though private sector organizations, such as the Trust for Public Land (TPL), the Nature Conservancy (TNC) and the Land Trust Alliance, are setting industry standards, FLP's guidelines (FLP 2003) make it a strong model for how government might participate in the conservation easement game. The matching component of the program, which requires that at least 25% of the total project costs be met through local sources, encourages collaboration between not only government and landowners, but also private conservation organizations like those listed above. These organizations lend their staffs, expertise and resources toward accomplishing FLP projects. The FLP also requires that projects take place within a state-based conservation plan called an Assessment of Need (AON), which is similar in concept to the widely promoted Conservation Action Planning (CAP) developed by TNC. The AON enables the program to achieve more than a piece-meal approach to conservation and be strategic with limited conservation resources. Another guideline of the FLP that makes it a strong model (and which this research goes on to explore) is to mandate the creation of a forest stewardship plan on all conservation easements.

Stewardship plans can be created to ensure that landowner management objectives, such as timber harvesting, recreation, and development, are compatible with the conservation values of an easement. Timber harvesting and other commercial activities certainly fall within the mission of the program, to preserve traditional forest

uses. FLP balances the right of the private property owner to cash in on commercial forest values with public interest in enjoying ecological amenities by mandating that a stewardship or multi-resource management plan be drafted to guide landowners in land management activities.

The FLP stewardship plans are a promising component of the program. This measure engages landowners in caring responsibly for their land in accordance with the terms of the conservation easements. But little is understood about landowner's experiences with these plans and whether or how plans affect management practices.

According to the FLP Guidelines (2003), a FLP stewardship plan must:

- Be prepared or approved by a professional resource manager
- Identify and describe actions to protect, manage, maintain and enhance relevant resources on the property
- Be approved by the State Forester or representative of the State Forester
- Involve the landowner in the plan development by setting clear objectives so that the landowner will clearly understand the completed plan

Within these plans, a number of resources are considered, including:

- Soils
- Water
- Access (roads and trails)
- Aesthetic quality

- Recreation
- Timber
- Fish and wildlife
- Forest Health
- Archeological, cultural and historical sites
- Wetlands
- Threatened and endangered species

Drawing on all New Hampshire easements that are funded as part of the USDA Forest Service Forest Legacy Program, this researcher proposes to report on landowner (or land manager) experiences with the stewardship planning process in order to discern how the process might be improved. Further, this study endeavors to understand if having a plan has influenced landowners' forest management practices. Stewardship plans are becoming accepted as a best practice that helps provide landowners with "clear direction on what management practices will be acceptable to the easement holder," (Boelhower 1995, 41). A central premise of this study is to observe whether plans in the context of this study actually cause landowners to manage their land differently than they might have otherwise or if plans merely formalize landowner intentions.

There is little evaluation of Forest Legacy Program conservation easements beyond "acres protected." As Wright (1994) observed, acreage is a crude measurement of conservation success that is applied broadly to the mission of "saving landscapes." Knowledge of the likelihood of influence upon landowners' choice of forest management

“FLP 5-Year Strategic Direction” and the ExpectMore.gov “Program Assessment⁷” are program performance measurement tools and do not evaluate the conservation tools of the program. Evaluation of landowner experiences with stewardship/management planning will help to better implement these projects with other populations.

Although the FLP is a voluntary program, stewardship planning is a required component of the program. Participants may not necessarily have envisioned or understood their stewardship responsibilities initially. In other studies on landowner experiences with stewardship planning, landowners were primarily concerned with stewardship or management (Erickson 2002, Keefer et al. 2002, Egan 2007, Burger 2002); whereas in this case, it is a secondary concern behind creation of and compliance with an easement. Boelhower observed in her 1995 study that little is known about how landowners feel about being required to submit a management plan for approval. Therefore, it is particularly interesting to follow-up with this population of landowners to learn about their experiences and how future experiences of this kind might be strengthened, particularly because this population did not necessarily volunteer to engage in planning.

Stewardship programs may also benefit from a better understanding of the diversity and specific needs of sub-populations of private forest owners in order to provide more targeted outreach efforts. Farm owners have been found to have significantly different land management values than general NIPF owners (Egan 2007, Erickson et al. 2002). NIPF owners have been reported to make land management

⁷ <http://www.whitehouse.gov/omb/expectmore/summary/10001008.2004.html>

significantly different land management values than general NIPF owners (Egan 2007, Erickson et al. 2002). NIPF owners have been reported to make land management decisions based on knowledge of environmental science (Paretti 2003), preferences and values and land management objectives (Butler and Leatherberry 2004). Among industry folks, training, attitude and interaction with foresters tend to influence land management decisions (Keefer et al. 2002). However, Burger (2002) indicated that demographic variables such as race, age and gender are not significantly associated with perceptions of stewardship. This study examines a diverse population of conservation easement landowners of whom all are required to submit a management plan according to the same standards. [See APPENDIX A, New Hampshire State Standards.]

CHAPTER II

METHODS

This work was intended to identify trends and issues for further consideration and research. Following Seidman's (2006) techniques for qualitative interviews, I spoke with land owners and managers to collect the story of the each stewardship or management plan: the context within which each plan was made, the experiences of land owners and managers in creating each plan, details on the content of each plan and the challenges and successes involved with each plan so far. From the findings of this study, future researchers may hone in on particular aspects of stewardship plans and survey them in greater detail with a broader sample.

Individual subjects are adult landowners in New Hampshire who have sold or donated a conservation easement on their property (or land owners or managers responsible for such a property) to a state or local government agency under the USDA Forest Legacy Program. As of early 2008, there were 19 easements funded by the FLP within New Hampshire. I discovered that one of the earlier easements was subdivided, bringing the count up to 20. I completed the interview with a land owner or manager in connection with 18 of the 20 conservation easement properties. There were 17 participants; two owners represented two conservation easement properties each and one property had two interview respondents. Many of the properties changed hands since the conservation easement was in place. For 17 out of 18 easements, the property owner, manager or other most knowledgeable person was interviewed. For one easement, the previous owner participated in the interview but the current owner declined. The State of

New Hampshire FLP project manager helped initiate contact with the landowners by sending a letter of introduction to land owners and managers via US Mail. This researcher followed-up with respondents via telephone and conducted the interview. [See APPENDIX B, Interview Questions.]

The questions in the interview were open-ended. These projects are so diverse that open ended questions were utilized entirely in order allow land owners and managers to identify issues most prominent to them within the interest areas defined by the researcher. Discreet choice questions may not have identified the full range of possibilities given the complexity of these projects. This creates some limitations in the data however. For example, consider the numerous possible answers to the question, “Within your plan, what limitations are there on timber harvesting?” Many participants described adhering to best management practices (BMPs) here (defined later in this paper), but were clear to note that they do not consider them limitations. This is noted in the results, however, it cannot be assumed that if a respondent did not report using BMPs as part of a plan that it is not indeed the case since the question asks for limitations (and BMPs are not) and the interview did not explicitly ask if BMPs were utilized. For this reason, it is difficult to quantify the characteristics of the plans and landowner experiences with them; it is only possible to describe what was reported with the caveats that 1) land owners and managers were not given discreet choices and may have interpreted the questions broadly, and 2) I did not collect the plan and easement documents and therefore has no recourse for gauging the accuracy of participant statements. It might have proved difficult or impossible to obtain each of these lengthy

documents and I deemed unnecessary to do so since the focus of this research was on land owner and manager experiences with, not necessarily on the content of, stewardship plans.

New Hampshire was chosen as the sample state given several characteristics including the mix and longevity of ownerships, the fact that the state requires public access, dedicated state office that deals with FLP and personal interest in New Hampshire. In a sample this small, it was difficult to discern whether an issue was an anomaly (not likely to reoccur on another property) or the beginnings trend. I tried to distinguish in the results section when issues were noted frequently, in several instances or in isolated cases.

Data analysis was completed using a grounded theory approach to qualitative data analysis (Miles and Huberman 1994). I read the interview transcripts and coded question responses according to ownership type and categorized by topic. From these categories, themes emerged and I reported on these trends in the findings section of this paper and discuss implications of these findings in the discussion section.

CHAPTER III

FINDINGS

Several key themes emerged in this study, including challenges related to natural resource inventory data and public access, influence of plans upon forest management practices, experiences with monitoring and plan revisions and the prominent role of third party organizations like the Trust for Public Land in shaping stewardship plans. The findings were prefaced by a characterization of the ownership types in this sample and how their respective characteristics related to stewardship planning experiences. A description of the norm for stewardship plans across ownership types was included to give the reader a frame of reference. The main body of the findings section primarily reflected the structure of the interview and was broken down by themes that emerged.

The first section was dedicated to an overview of challenges faced by respondents throughout their stewardship planning experiences. In this section two separate themes emerged- challenges related to natural resource inventory data and public access. These two topics were addressed further, but public access was explored in greater detail because it was a more common challenge with more facets. All terrain vehicles (ATVs) were featured as an in-depth example of a particular public access challenge in stewardship planning. ATV use was such a ubiquitous challenge reported throughout the interviews that it warranted its own section.

The next section of the findings reports on issues related to timber harvesting. First limitations on timber harvesting were discussed. Then the instances in which land owners sought additional encumbrances or protection were examined. Harvest methods

were then examined, with particular attention to clear cutting. In closing to the harvest section, the responses to the question, “Has the plan affected your forest management practices?” were reported upon.

Monitoring and revisions were important components of stewardship planning and as such, were a focus in the interviews. The purpose of these questions was to discover how these two means of state and land owner/manager interaction were experienced. In relation to monitoring, the responses to the question, “Did monitoring help the owner/manager meet his or her goals as outlined in the stewardship plan?” were examined. Since revisions were a key part of the ongoing maintenance of stewardship plans, the details on land owner/manager experiences with revisions were reported upon.

In departure from the interview structure, a special section on the role of the Trust for Public Lands (TPL) in FLP projects in New Hampshire was included. TPL played a prominent role in many projects and their level of involvement merited further examination in this section. And lastly, in an effort to capture the bits of stewardship planning wisdom offered by some respondents, a “lessons learned” section concluded the findings section.

A Diversity of Ownership Types

There were four main ownership types in the sample- non-industrial private forest (NIPF) owners, municipal owners, nonprofit owners and timber investment management organizations (TIMO). [See table #2]. Each of the ownership groups have distinct characteristics, land management priorities and motivations for participating in the program. These factors bore influence on the planning processes of each ownership type.

Table 2: Breakdown of surveyed conservation easement properties by ownership type

Ownership Type	# of CE Properties
NIPF	2
Municipal	4
Nonprofits	5
TIMO	6

NIPFs in this sample were largely concerned with finding a way to keep their properties in their families. One owner experienced frustration with the planning process and the other used the process to engage current and future family members in maintaining the land cooperatively. The planning process was largely a private affair for these owners.

Municipal owners, or owners of town forests, were predominantly concerned with preserving the rural character of their towns by securing public access to local forests and ensuring inputs into the local timber economy. The planning processes for town forests are very public, sometimes contentious, affairs in which diverse stakeholders seek to have their favored uses provided for in the plans.

Nonprofit owners were concerned with extending the missions of their respective organizations. The planning process for these owners was often part of their normal operations or informed future planning operations. Like municipal forests, nonprofit

owners were accountable to a diverse array of stakeholders; however their planning processes were not as public.

Timber investment managers' primary concern was to manage forests for profit. If they were a first generation owner, their participation in the program was likely a way for them to cash in on a value other than real estate. Some were already certified by a third party that requires a management plan; for some, this was the first time they completed a management plan of this caliber. If they were a second generation owner, they bought the property with the previous owner's plan in place.

The Norm

To understand what to expect from stewardship plans in New Hampshire, it may be useful to understand the norm for such plans. I defined the "norm" based on the FLP Implementation Guidelines (2003) and on my conversations with the New Hampshire FLP State Coordinator. Goals included a diversity of values and interests including forest productivity, wildlife habitat, public recreation and access, water quality, productivity of soils, biodiversity, protect rare, threatened and endangered plant and animal species, among others. The State of New Hampshire monitors the property annually. Monitoring activities generally involve a site visit during which a representative from the State tours through areas of interest, such as recent harvest areas or special management areas. The landowner or manager meets with the representative to discuss activity on the property and has the opportunity to talk about successes, discuss challenges and solicit advice or input.

Whatever uses are provided for on the property must be included in the stewardship plan, which elaborates on the extent of activities and how impacts will be

mitigated. There can be no contradictory uses or uses which undermine the values set forth in the easement. Easements must at least include passive pedestrian access. For the most part, hunting and fishing are required but there are a few exceptions. Snowmobiling is an important industry and pastime in New Hampshire. The state has designated snowmobile trails that are mapped and maintained in cooperation with state and clubs. If a Forest Legacy property has one of these trails, there is a separate agreement attached to the easement wherein the trail is protected. There is mention of the snowmobile agreement in the easement and the agreement is attached to the easement. The agreement could be modified upon agreement of the easement holder and property owner, but the agreement is like the easement in that it is meant to be in perpetuity.

Challenges

There was a diversity of challenges reported throughout the interviews. Wishing to possibly utilize this alternative to conventional energy production in the future, a private landowner was not pleased that his stewardship plan prohibited any wind power turbines on the property. Two town forest representatives expressed concern with the forest products industry because timber prices were down and the pulp mills were declining in the area. A future challenge will be for the timber industry to remain healthy in the region so the forests can retain forest-use value. In the case of town forests that designate timber receipts to non-forest investments, they may face pressure during economic down turns to harvest more timber or find alternate revenue sources. Another town forest representative described her town's frustration as they sought to understand legal issues surrounding the management authority over the property. At the onset of this

town's project, it was unclear how the forest would be managed and by whom. There were many concerns, but two important themes arose as challenges in the stewardship planning process: issues related to natural resource inventory collection and public access.

Natural Resource Inventory Data

Financial and time constraints in collecting natural resource inventory data on which to base the plan can complicate management. If inventory data is insufficient, plans could require revisions as more information is discovered later. Two managers- one timber investment manager and one nonprofit manager- experienced the frustration of not budgeting for this data collection and another nonprofit found that surveying the property late in the plan caused complications. The timber investment manager recommended that managers collect more inventory data up front so they can avoid amending the plan as frequently as he did- more than 10 times over the course of 6 years. This manager felt it was better to have everything approved before hand than to ask permission to change things later. In this case, the landowner cut the inventory from the original proposal submitted by the manager in an effort to keep costs down; ironically, frequent amendments could slow the operation down and raise costs for the landowner.

Nonprofit landowners encountered problems with inventory data collection. One nonprofit forest manager reported that he was pressured to complete his inventory in too short a time frame so that the easement could close. He stated that he intends to begin the planning process much sooner next time, at about 5 years prior to the required revision date. He said that getting the process going early will allow him to collect data when it is

seasonally most appropriate. Another nonprofit representative reported a challenge in that the survey for the actual boundaries and acreage of the property was the last step in their stewardship plan and recommended doing it at the beginning. Their survey produced an acreage figure that was about 5% larger than what was estimated on the property after they had designated harvest areas and volume and thus, complicated their planning process.

Public Access

Defining the nature of public access was reported often as the biggest challenge faced in stewardship planning. One timber investment manager expressed concern that the public will grow concerned or interfere with forest practices as a result of encouraging access. Nonprofits in particular faced some challenges as they were required as a condition of FLP funding to entertain some uses that are traditionally allowed on public lands but generally not on their properties. One nonprofit was beginning the conversation with local stakeholders to consider two uses currently not provided for in the property's stewardship plan- horseback riding and bear baiting, a particular and sometimes controversial method of hunting bear. The representative from another nonprofit expressed concern that hunting and trapping are allowed in their plan and are typically not allowed on other properties owned by this conservation organization. The representative in this case felt that in allowing these activities on their property, the organization had strayed from its mission. He would've preferred that the goals of the easement and plan be more in line with the organization's goals.

Landowners and managers across all ownerships (except private non-industrial) reported conflicts associated with public access. Two timber investment managers had conflicts with snowmobile use degrading roads used for harvesting. In one case the manager felt that the snowmobile groups' cost share was not enough and in the other, the manager reported that the impact delayed a planned harvest. A town had to restrict target shooting because it could not be safely contained and reasonably monitored and it clearly interfered with other uses which the easement sought to protect. A nonprofit and a timber investment manager/owner both reported property destruction from ATVs and trucks and dumping associated with public roads on their property to which the owners were unable to restrict access. Indeed, 5 property owners and managers (2 nonprofit, 2 timber investment, and 1 town) reported some degree of conflict with ATV use.

ATV Use

ATV use concerned many owners. Private owners reported having no problem prohibiting ATV use, probably because their properties were not primarily used for commercial timber operations and as such, weren't used by ATVs prior to the easement and plan. But respondents from all other ownership types reported some degree of challenge in regard to ATV use. Because of the existence of logging roads on these properties, perhaps ATV use continued because some people felt that they had a natural right to continue to use motorized vehicles on the property. Previous owners may have condoned that activity. It has been a challenge for owners that choose to ban ATV use to stop such use, particularly at the beginning of the restriction. Monitoring for illegal ATV activity was reported as on-going in several cases.

Unlike private owners, municipal owners had a greater responsibility and impetus to entertain ATV use on their forests. The ATV community was in their infancy in determining how they manage themselves or trails. At the time of this study, ATV clubs were beginning to organize, however they had a long way to go before they become as influential as snowmobile clubs in the state. Members of the ATV community were residents and constituents of the towns that own these forests and as such, clearly had a right to petition to be included in stewardship plans. The State encouraged communities to resolve issues surrounding ATV use on their own by neither advocating for or against ATV use on FLP-funded conservation easement properties. In fact, the state would not accept an easement that either prohibits or guarantees the right of ATV access, ensuring that the matter will always be open for exclusion or inclusion in stewardship plans.

Believing ATV use to be good for the local economy because of tourism dollars this activity would likely generate (like snowmobiles), one town opted to incorporate ATV use on their forest land. This town was in the process of building ATV use into its plan according to terms that would be acceptable to the State. As part of this process, the town was working with local ATV clubs to discuss funding issues to construct and maintain trails for ATV use. Unlike the snowmobile clubs, the ATV clubs were not eligible for state grants for these purposes. The town was counting on the ATV community to police themselves and not cause excessive impact.

In another town, the use of ATVs may have been at the root of a controversy over who should manage the forest. The town struggled to determine whether the Board of Selectmen (the governing body of towns in New Hampshire) alone or a specially created

Forest Advisory Committee, a subcommittee of the town Conservation Commission (overseen by the Board of Selectmen), would oversee management of the town forest. In the end, the Committee option prevailed and at the time of this study, the 7 member committee was against ATV access. If the Board of Selectmen were given absolute authority, the ATV issue would likely have gone the other way since one of the Selectmen advocated circumventing the planning controversy by adding ATV use to the easement. As a result of this controversy, the respondent in this case expressed the wish that someone had been available to them during the initial easement planning process who was experienced with state statute and could've helped them better understand management authority.

Since the easement closed in this town, an application to revise the plan to include ATV use has been submitted and withdrawn, likely because of controversy over the definition of "low-impact." The easement on this town forest mandated that there be guaranteed public access to hike, hunt, fish, trap, cross-country ski, observe wildlife and participate in other *low-impact* outdoor recreational activities. ATV use is arguably unlikely to fall into the category of low-impact outdoor recreational activity. According to the respondent, this controversy sparked a debate that resulted in proposed state legislation on the definition of "low-impact."

Striking a balance between encouraging or prohibiting ATV use, one town coped with wheeled vehicle use by developing a seasonal schedule for the roads most likely to be impacted by use during sensitive times. For example, some roads may be inappropriate for use in the spring time when the roads are soft and erosion potential is

high. During their planning process, this community recognized “wheeled vehicle use,” (which includes truck, ATV and bike use), as a use of importance to their community and found a way to work it in to the plan. This compromise could serve as a model for dealing with this contentious issue on town forests.

Timber Harvesting

Limits

The interview featured a question about limitations on timber harvesting featured in the stewardship plan. The term “limitations” was not well received. Many participants, including *all* timber investment managers, described adherence to state defined best management practices (BMPs), but clarified that they did not consider those to be limitations. Adherence to New Hampshire’s BMPs was voluntary. New Hampshire’s BMPs were largely defined by a 1998 document called “Good Forestry in the Granite State.” Three easement tracts (two nonprofit and one timber investment owned) reported having plans that feature special management areas which contain actual limitations, such as riparian buffers. One nonprofit owner restricted timber harvesting entirely and two others removed substantial portions of timber from their harvest bases. One private landowner, whose easement is owned by the federal government, reported no limitations in the plan on timber harvesting. Two respondents (a timber investment manager and a town forest representative) specifically mentioned restrictions on harvesting above a certain elevation. Only one respondent, a timber investment manager, reported any limits

on the size of clear cut, but pointed out that the limitation was contained within the easement and not the plan.

Additional Protection/ Encumbrance

Several forest owners and managers reported that their properties were under further management restrictions than those required by the FLP. Two timber investment managers reported that their forests were Forest Stewardship Council (FSC) certified. The certified timber market is an example of an alternative value that investment managers are likely to consider. One land manager said he believed that the FSC requirements were more stringent than the FLP guidelines. Since both forests were FSC certified prior to getting involved with the FLP, perhaps the level of planning and monitoring required for FSC makes participation in the FLP seem less of an obstacle.

A private landowner reported utilizing two other means to formally protect her land- tree farmer certification and a legal agreement dictating family governance structure. The tree farmer certification required much the same elements as the FLP. To participate, a landowner must: maintain at least 10 acres for growing and producing forest products, have a written plan, follow management recommendations of a licensed forester and demonstrate commitment to managing their forest for multiple values⁸. Tree Farm management plans qualify productive forest land for current use tax assessment. Again, if land owners and managers have already have been required to prepare a

⁸ <http://extension.unh.edu/Forestry/TreeFarm.htm>. "UNH Cooperative Extension Forests and Trees – NH Tree Farm Program." Accessed July 2008.

management plan as a requirement for participation in programs such as these, perhaps this makes FLP participation easier or more likely.

This private landowner also described a legally-binding agreement created by her family to create a framework for sharing stewardship planning responsibility within the family. The respondent referred to it as a “bloodline agreement” and described it as follows: She and her three siblings comprised a committee dedicated to creating and monitoring the stewardship plan on the property. One member of the committee was appointed to serve as the chair and person ultimately responsible for completing and enforcing the plan. This was a rotating position. The family agreed to revisit the site and the plan annually as a group and to revise the plan every 5 years, rather than the required 10 year term. Their agreement provides for future stewardship planning on the property beyond their lifetimes, requiring that from the descendants of each of the four siblings, one family member be elected to serve on the 4-person committee. In view of the perpetual nature of conservation easements, this last feature makes good sense and will likely serve to help avoid conflict within the family as time goes on.

One nonprofit respondent reported selling an additional easement to further restrict their property. The additional easement was sold to another nonprofit conservation organization and excludes ATV and motorized vehicle use (accept snowmobiles on pre-existing trails), road construction, trail construction without permission, horseback riding, the introduction of non-native plant and animal species or genetically modified organisms. The additional easement was feasible since it was more restrictive than but did not contradict the original easement. These types of uses are

generally described in the stewardship plan, not the easement, and are therefore subject to change. Landowners with strong conservation goals may choose to further protect their properties by adding more restrictive easements. Selling additional easements also helps recoup funds invested in the purchase and maintenance of property.

Harvest Methods

There were a diversity of harvest methods described and most owners or managers that responded to this question did not go into great detail. Many properties had been heavily harvested or abused by previous owners, (2 nonprofits, 3 timber managers and 1 municipality). Three participants mentioned using clear cut or regeneration cuts (2 timber managers, 1 municipality). Two mentioned patch cuts, which are generally defined as clear cuts smaller than 5 acres in size, (1 private owner, 1 municipality). Two mentioned thinning or selective harvesting, (1 timber manager, 1 municipality). Both private non-industrial owners in the sample expressed concern about the impact of the machinery used by conventional harvesting methods. One of these owners has employed horse logging as an alternative to minimize impact. The other owner explained that when he logs, his trails are about 8-10 feet wide, but contractors make trails 20 feet wide. He was also concerned that contractors would not have respect for sensitive features on the property, such as the historic stone walls on the property.

The Effects of Plans on Forest Management Practices

Respondents were asked the question, “Has the plan affected forest management practices?” The intention of this question was to discern if creating the plan caused land

owners or managers to manage their forests any differently than they intended prior to the plan. The responses were mixed. Four participants said nothing in their forest management practices changed (3 timber managers, 1 private owner). Two folks said they would not have created the plan if had not been required (1 nonprofit, 1 timber manager). Two timber managers observed that unlike other management plans they prepare, this plan required them to get into much greater detail on non-timber values. Their plans would not be concerned with information about items such as soils, wildlife, geographic location and road access, but would rather focus on things like the harvest rate, silvicultural methods prescribed, timber inventory, etc. They would leave such considerations to the discretion of their foresters. Two municipal owners and one nonprofit owner placed high value on the influence of their plans. The nonprofit respondent said writing the plan helped them figure out what needed to happen on the property. One municipal owner felt that without a plan, people may have fought about how the town managed the property. The other municipal owner said they wouldn't manage their forest without a plan because it is the blueprint for what they're going to do in the next 10 years, further elaborating that the plan didn't hinder activities, it supported them.

One timber manager purposely frontloaded their harvest levels in the plan (i.e. said they would be higher than intended) because he didn't trust that the state would not try to intervene and say that harvest levels were unsustainable. However, the plan was approved so he no longer had concerns about the State lowering harvest. Rather than increase their harvest level to the inflated amount, they have cut considerably less than

the plan allows them to cut. This respondent stated that in future years, harvest will be much closer to what is stated in the plan.

The representative for one nonprofit's property observed pressure to uphold a timber operation and harvest a certain volume of wood. He reported that the pressure came from the New Hampshire Forest Legacy Committee⁹, which may have encouraged more rigorous harvesting to improve the project's chances of ranking well within the FLP prioritization and funding process. He described the situation as a little backward since usually the landowner wants to harvest as much timber as possible to make a profit and it is the easement holder who resists. Although the organization was well acquainted with timber harvesting and has harvested timber on other properties, the owners would have preferred to keep this property for habitat and would not have chosen to cut as aggressively. In this case, the organization was required to carry out a timber operation as part of their ownership responsibilities and a lot of the planning process was devoted to defining timber harvest areas. The organization wanted to protect special management areas from timber harvesting and ensure that forestry activities did not interfere with their main goals on the property, education and low-impact recreation. They were able to protect these values as part of their plan.

⁹ The New Hampshire Forest Legacy Committee: The 1990 Farm Bill delegated responsibility for coordinating the Forest Legacy Program in the states to the State Forest Stewardship Committee. In New Hampshire the Forest Stewardship Committee has authorized the New Hampshire Forest Legacy Committee to administer the program. The NH Forest Legacy Committee is a working committee of the NH Forest Stewardship Committee. Committee Members are appointed by the State Forester. They represent a variety of interests and have expertise in the areas of land protection and resource management. The committee makes recommendations to the State lead agency regarding the State's assessment of need (AON), AON amendments, and the determination of project priorities. For more information see: <http://www.dred.state.nh.us/divisions/forestandlands/bureaus/director/ForestLegacyCommittee.htm>.

main goals on the property, education and low-impact recreation. They were able to protect these values as part of their plan.

Monitoring

Most properties in the sample have experienced annual monitoring by the State. A few properties with plans that were still quite new and had been finalized within the last two years had not been monitored yet. TPL owns a property that is in the process of being conveyed to a town so that property is exempt from monitoring. Of the four easements owned by the Federal Government in the sample, it was unclear if monitoring was taking place at all on two properties; the State has accepted monitoring responsibility for the other two.

Land owners and managers were asked if monitoring helped meet their goals as defined by their plans. The object of this question was to determine if monitoring created additional opportunities for land owners and managers. As might be expected, a couple respondents reported that monitoring has helped them meet their goals by helping them comply with the easement (1 timber manager, 1 municipality). Two timber managers said no to this question, one stating that monitoring is more for the State than the forest manager and the other elaborated that while monitoring has not helped him meet his goals, it hasn't hindered them either.

Three land managers reported that monitoring did indeed help them meet their goals. A timber manager noted that although it added an additional layer of time, monitoring has sharpened his company's foresters and taught them how to respond to public interest in their forest management. A nonprofit representative appreciated that

(target shooting) and created the opportunity for the State to lend their authority to the situation by stating that the use was clearly off limits.

Revisions

Revisions to stewardship and management plans were quite common. Three respondents reported one to two revisions (1 timber manager, 2 municipalities), two reported three to five revisions (1 timber manager and 1 municipality), and one timber manager reported approximately ten revisions. Reasons for revision were to: build roads or trails, change harvest prescription (method and volume), exclude or include access/activity, delay harvest (for environmental or market reasons), or modify items within plan structure (move from goal to action part of plan). One timber manager felt the approval process took too long; the state exceeded their target approval date by approximately 10 months. One private nonindustrial owner reported that her family has chosen to revise the plan every 5 years, rather than follow the 10 year revision schedule.

The Role of the Trust for Public Land in Stewardship Planning

The Trust for Public Land¹⁰ (TPL) played an integral role in several of the FLP projects in New Hampshire (at least 2 nonprofit owned forests, 1 municipal forest and 1 private nonindustrial owner). As with most land trusts, TPL's involvement provides the State and landowners more time and a tremendous amount of expertise. They are often

¹⁰ "The Trust for Public Land (TPL) is a national, nonprofit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places, ensuring livable communities for generations to come." http://www.tpl.org/tier2_sa.cfm?folder_id=170. "About TPL." Accessed July 2008.

private nonindustrial owner). As with most land trusts, TPL's involvement provides the State and landowners more time and a tremendous amount of expertise. They are often closely involved with FLP projects and their involvement generally means that the State does not have to deal directly with landowners as much. The hope is that TPL can bring their expertise and make property transactions (purchase, easement and plan) run more smoothly. FLP projects can take years and in some cases, landowners don't have years. TPL often lends support by becoming 3rd party owners, granting the State and future landowners more time to complete the project. TPL sometimes contributes money to purchase the property and hold the property while FLP funds come through and the future owner gets things together. They also will often fund the appraisal, survey or title work. Anytime a nonprofit sponsors these projects, there is far more likelihood that private donors and foundations will support the project. TPL and similar organizations bring many resources to the table.

Whenever the value of a project aligns with their goals, TPL will consider stepping in. They have expertise in working with private landowners. TPL can serve as a liaison between landowner and state because they know the process so well and they save the State from having to spend a lot of time helping landowners through the process. TPL, when involved, can bear a tremendous amount of influence on stewardship plans. They relieve the landowner of the burden of organizing the creation of the plan through hiring the forester, doing the land survey, contracting the appraisal and doing title work. They are so familiar with the process that they can guide the landowner through it. If the landowner tried to do it themselves, it might be more difficult.

Feedback from land owners and managers of projects in which TPL was involved was mostly positive, but one nonindustrial private owner reported a very negative experience. One nonprofit representative said that his organization would not have done the project if not for TPL helping with fundraising, acquisition and planning. TPL bought the tract, sold easement to the State and completed the stewardship plan with the nonprofit's input, and then sold the property to the nonprofit. If not for TPL's efforts in this case, the small nonprofit would not have taken on the daunting task of participating in this federal program. Although the organization was experienced with forest management and owns approximately 60 easements, TPL's experience with FLP helped them cope with the greater level of responsibility required of landowners by this federal program.

In the case of one privately-owned forest, TPL acted as fundraisers for the project and worked with the landowner and State to negotiate the terms of the easement and content of the stewardship plan. The landowner believed that TPL and the landowner would decide on things, like trail locations or access to roads, but reported that TPL would sometimes change things later. Also, the landowner viewed TPL as being very aggressive about securing public access. The landowner regards TPL's involvement in this case as disastrous and looking back now, the landowner would choose not to do it again if he knew how difficult the process would be.

Lessons Learned

Land owners and managers were asked in each interview, "What was the most important lesson learned?" It was a common question for respondents to skip, however,

some responded thoughtfully. The following is a summary of answers to this question, grouped by ownership type and presented in their words (as recorded by the researcher):

Timber Managers

- It is a lot of work...but it works! We're able to balance multiple interests in this property...we focus on harvesting timber and the state focuses maintain recreation and public access.
- You have to be patient. It took a very long time for us to complete all of the steps involved with the easement and the management plan (4 ½ years).
- Forcing people to do higher level management plans when it doesn't make good economic sense encourages sloppy work. There was a big ice storm the other year and the value of timber has declined. After events like those, the management plan gets thrown out the window. It's all guesswork. Forest management plans aren't worth much as far as I'm concerned. They make the town or the state happy, but the first person to please is the landowner. The person paying the bill is going to determine what gets done. If they recommend not harvesting but the land owner later needs money, they can turn around and rewrite the plan. Even though the state monitors every year, they just look at a small piece. One day a year is not enough to cover 1600 acres.

Nonprofits

- The person(s) preparing the plan should be in direct communication with the State (the easement holder). Handing down information through the organization's

administrators is not sufficient. Without direct communication, you risk spending a large amount of time in revisions prior to the approval of the plan. From the beginning, organizations and those individuals making the plan should know exactly what the plan requires and what the easement holders expect.

- You really need to understand the interests of all stakeholders involved- understand the goals of major partners (i.e. donors), the history of land use (i.e. former owners, family and community attachment to and expectations of property, etc.), FLP requirements and expectations of easement holder, etc. - and put all pertinent information in one succinct document.

Municipal Owners

- Never say no and never take no for an answer. It can be very easy to get discouraged early on. No matter how small your town is, if you've got a good project, you can make it work. It takes a tremendous amount of work though... but it's all for a good cause.

CHAPTER IV

DISCUSSION

The purpose of this study was to better understand the experiences of land owners and managers with stewardship planning. In the findings of this study, I described the challenges and considerations, the knowledge of which may be used to make improvements to the planning process and promote best practices. Further, I tried to contribute to the fields of natural resource policy and management by understanding if the process of creating a stewardship plan in any way affected the forest management practices of land owners or managers.

The capacity of plans to influence management practices is debatable. In most cases, land owners and managers reported that plans simply reinforced how they chose to manage their forests. However, there were cases in which respondents placed high value on the planning process as a means for helping them identify appropriate forest management practices. This seemed more often the case when the owner or manager was not a professional forester. Professional forest managers were less apt to report any influence on their forest management practices beyond having to meet a degree of planning detail higher than which they are accustomed. In one instance, fear of reprisal caused a timber manager to overstate intended harvest levels. But plans and related activities were found to be more likely to bear influence on the forest management practices of nonprofit, municipal and private non-industrial owners than on the forest practices of professional timber managers.

Perhaps the most interesting potential influence that plans bore on forest management was found in the compromises made by nonprofit owners in the sample. In order to meet the standards of the FLP and qualify for funding, the ways in which nonprofits typically manage their forest lands were challenged. One manager reported that his nonprofit typically does not allow hunting and generally manages their lands as wildlife sanctuaries. One respondent reported that his organization was pressured to harvest more timber than they might have otherwise. All found a way to permanently remove some forest land from the timber harvest base so that sensitive ecological values could be protected while maintaining working forest land elsewhere on these properties. But as one respondent observed, although nonprofits are not new to managing working forests, they must proceed cautiously so as not to offend their supporters and stakeholders. In order to tap into timber harvesting as a revenue source, nonprofits need to assure that such activity is compatible with their missions. Stewardship planning can potentially facilitate that compatibility if the process is comprehensive, as FLP stewardship plans are required to be. Transparency in the stewardship planning process will also likely aid in communication between nonprofits and their constituents.

I was also interested to discover what limitations, if any, existed on clear-cutting within the plans. Clear-cutting is a sometimes controversial method of timber harvesting in which areas of contiguous forest (generally larger than 5 acres) are cleared at once (Helms 1998). Arguably, this method of harvest may threaten forest and non-forest values which easements and plans seek to protect. None of the respondents reported that there were restrictions on clear cutting in their plans. Presumably, owners and managers

were left to choose how and if to apply this method of harvest. However, it is possible that restrictions on clear cutting could exist in the easement (as was reported in one case) and therefore are permanent restrictions. Huff (2004), using the same data as Mortimer et al. (2007), found that conservation easements owned by public agencies (both WFCE and non-WFCE) were less likely to restrict clear-cutting than those owned by private organizations.

Would stewardship planning likely increase the chances of the easement property maintaining ecological value over time? When there is a high likelihood of stability in ownership, these plans have great potential to strengthen and preserve conservation values over time. As we move further away from the original owners and plans, greater efforts will be required to ensure stakeholder buy-in to the planning process. The sample only contained two second generation landowners, so this topic is difficult to address in this study. However, at least one second generation owner seemed less invested in plans in general and was very displeased with the plan he inherited. It was not clear from the interviews how landowners were engaged when properties changed hands.

The private landowner sample was small, but given the relatively high level of involvement of TPL in these projects, a word of caution is due. The state welcomes third party participation from land trusts to help leverage resources such as time, money and expertise. However, it would seem at least in one instance, the State might have better served the land owner by getting more directly involved. The importance of maintaining strong relationships between land and easement owner cannot be stressed enough.

CHAPTER V

CONCLUSION

On the whole, the stewardship and management plans completed by the subjects of this study were both positive experiences for the land owners/managers and useful tools for meeting the priorities of both land and easement owners. A number of challenges were experienced by respondents in creating plans, particularly surrounding natural resource inventory data and public access, including ATV use. Plans and related activities were more likely to bear influence on the forest management practices of nonprofit, municipal and private non-industrial owners than on the forest practices of professional timber managers. Future efforts to improve stewardship plans should focus on strengthening relations between the land owner and State to ensure that plans remain relevant over time, particularly after properties change hands.

This study revealed many possibilities for future research. With challenges identified through the process of open-ended interviewing, further research could be conducted on many of the topics discussed. How much do revisions to plans drive up the cost of production? Is it worth it to invest more up front in gathering data in order to avoid revisions later? Does the FLP create incentive or pressure for landowners to harvest (or plan to harvest) more than intended? What are the implications of TPL's involvement in stewardship planning? How do second generation owners (and beyond) handle planning? What issues will they face?

APPENDIX A

NEW HAMPSHIRE STATE STANDARDS

i. Content. The Initial Stewardship Plan for the Property shall be developed by the Fee Owner and submitted to the Easement Holder for approval no later than December 30, 2006. Updated Stewardship Plans shall be submitted at least once every ten (10) years thereafter. Each such Stewardship Plan shall be consistent with and specifically address how each of the Purposes and Stewardship Goals, as set forth in Sections 1 and 2.C, are going to be achieved or progressed towards. A Stewardship Plan or amended Stewardship Plan, as provided for in Section 2.F.ii, shall remain in effect until superseded by a subsequent Stewardship Plan. Information in the Stewardship Plan should be reasonably sufficient to assess that the Property is being managed sustainably and in accordance with the Stewardship Goals. Stewardship Plans shall include at least the following elements:

- a. Maps, Descriptions and Management Considerations for the following resources:
1. Forest types and/or natural communities including past management history, general tree growth rates and quality, insects and disease, access and operability;
 2. Management units into which the Property will be divided (“Treatment Units”)
 3. Geological attributes including topography, soils, aquifers, wetlands, ponds and streams;

4. Known habitat features for wildlife, and rare, threatened or endangered animal species;
5. Known exemplary natural communities and rare, threatened or endangered plant species;
6. Known archeological, historic and cultural resources;
7. Aesthetic resources;
8. Forest access roads and trails;
9. Improvements ancillary to Forestry, Conservation and Recreation Activities;
10. Outdoor recreational features including all roads, trails, primitive campsites, lean-to shelters, remote cabins, yurts, maintenance facilities, water access area and parking lots;
11. Adjacent conserved land as it affects the Property; and
12. Known aquifers, well heads, and other public water features.

b. Description and Discussion of the Fee Owner's Goals, Objectives and Planned Activities for Management of the Property, including:

1. Forest management goals and objectives including forest structure and composition goals for the Property;
2. Management objectives and planned activities for the Treatment Units;
3. Management objectives and planned activities for wildlife, and rare, threatened or endangered animal species;

4. Management objectives and planned activities for the conservation of exemplary natural communities, and rare, threatened or endangered plant species;
5. Management objectives and proposed structures and improvements for recreational uses of the Property;
6. Management objectives that protect and minimize harm to coastal and estuarine habitats and water quality from the forestry activities on the site;
7. Proposed cost-reimbursement based user fee system, if applicable;
8. Management goals for aesthetic resources including consideration of visual impact of management activities on the Property from public highways and trails;
9. Management goals and proposed structures and improvements for Forestry, Conservation and Recreation Activities on the Property;
10. Management goals and planned activities to provide access, to, on and across the Property; and
11. Proposed public access limitations

c. Description and Discussion of all of the Fee Owner's Other Proposed Activities on and Management of the Property.

APPENDIX B
INTERVIEW QUESTIONS

Describe the nature and length of your relationship with this property:

How was the management plan created for your property?

1. Who was involved?
2. Describe your role in the process.
 - If industrial landowner-someone on his/her staff or someone s/he hired wrote the plan. NIPF landowners might use a State service forester or consulting forester paid for usually by landowner.
3. Was the plan completed prior to drafting the easement or after?
4. What were your goals going into the process?
 - Probe: What values were most important to you? What activities did you wish to plan for on the landscape?
5. Were you satisfied with the process? Are you satisfied with the resulting plan?
 - Probe: Were you satisfied with the review and approval process?
6. Are there any improvements to the process that you would recommend?
7. What is the biggest lesson learned?

Content of the plan:

8. Within your plan, what limitations are there on timber harvesting? (riparian set-backs, slope restrictions, limits on size of clear cut, etc.)

- Probe: Are these limitations due to the language of the easement, state or town law or management philosophy?

9. Have you harvested timber since the plan was in place?

If yes:

- a. Did you receive technical or other type of assistance?
- b. Describe the harvest in terms of acres harvested (relative to the total acreage) and silvicultural methods used.
- c. If you harvested timber on your property prior to the stewardship plan, how has the plan changed the process and outcomes of timber harvesting for you?

10. How has the plan affected your forest management practices? (i.e. What forest management practices will you do differently than you might otherwise have done without the plan?)

11. Has there been any other activity that took place or that you've considered that presented some challenges or conflict in respect to your land management goals as outlined in your stewardship plan?

Monitoring:

12. Who has been conducting the monitoring of your property?

13. Describe monitoring activities (how frequent, do they notify you in advance, type of monitoring, etc.)

14. What has been the biggest success on the property?

15. What has been the biggest challenge/disappointment?

16. Has the monitoring process helped you meet your goals?

Revising the plan:

17. Has there been any need to revise the plan?

a. If yes, describe.

18. When do you plan on revising or reevaluating the plan?

19. How will revision take place? (Who will be involved and how)

20. What would you do differently next time?

Is there anything else I should have asked you?

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