Forest Stewardship

by Mount Grace Land Conservation Trust: Case Studies and Lessons

Commissioned by the Southern
New England Forestry Consortium, Inc.

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Mount Grace Land Conservation Trust
1986 twenty years 2006
20,000 ACRES

Foreword

If anyone doubts the compatibility of land protection and forest management, they need look no farther than Mount Grace. Twenty years ago this conservation group stepped gracefully beyond the preservation-versus-timber production tension and created a locally inspired approach to keeping land open and undeveloped. Ever respectful of landowner philosophy, Mount Grace has shown that it can be an effective voice for conservation in all forms in its region.

It is not by accident that Mount Grace understands the importance of forests and forestry. The involvement of foresters and ecologists like Bruce Spencer, John O'Keefe, Glenn Freden, Keith Ross, Anne Marie Kittredge, David Foster, Cynthia Henshaw, Richard Simoneau, Joe Smith, and Charlie Thompson has been pivotal in crafting this successful approach. Partnering with groups, towns, agencies, and landowners has been fundamental to their success. The results speak quietly and convincingly: 20,000 acres forever open and productive and 1,000 acres of Living Endowment for Mount Grace to support their efforts and demonstrate that good forestry pays its way in the short and long run.

David B. Kittredge
Extension Forester and Professor
University of Massachusetts-Amherst

About Mount Grace Land Conservation Trust

Mount Grace Land Conservation Trust protects significant natural, agricultural, and scenic areas and encourages land stewardship in North Central and Western Massachusetts for the benefit of the environment, the economy and future generations. Mount Grace is a private, registered, 501(c)(3) non-profit organization. With over 700 members, the Trust's work is sustained by individuals who have a common goal: they want to see the rural landscape and natural resources of north central and western Massachusetts conserved, so that all may enjoy and appreciate these lands in perpetuity.

About SNEFCI

The Southern New England Forest Consortium, Inc. (SNEFCI) is a non-profit forest conservation organization that promotes forest conservation and the productive use of the region's forests and natural resources. Established in 1985, SNEFCI's vision is to serve as a regional leader in the promotion of wise forest conservation principles. Its goal is twofold. First, to communicate to residents the importance of forested lands and the value of forest stewardship practices. Second, to work with and influence those who can impact the condition and quality of these lands.

Cover images and image above by Pam Kimball-Smith.

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David Foster

The views from the hills of the North Quabbin encompass nearly unbroken forest.

"Mount Grace's practice of encouraging stewardship by demonstrating ecologically sound forestry on our own lands helps us relate more effectively with the range of local landowners we work with."

—Leigh Youngblood, executive director, Mount Grace Land Conservation Trust

Introduction

Standing atop Mount Grace in Warwick, Massachusetts, one takes in a view of nearly unbroken forest, stretching north to the rocky summit of Mount Monadnock in New Hampshire, west to Mount Greylock, south to the Pelham Hills, and east across the Worcester Plateau to Mount Wachusett. This is a vista that the region's Native Americans and first colonial explorers would have viewed centuries ago. Its serenity belies the turbulent history that witnessed the removal of most of the trees from this rocky landscape; as recently as the mid-1800's, this land was less than 40% forested. Today's forests cover 81% of north-central Massachusetts, reflecting a rapid and dramatic recovery as industrial centers attracted a migration of populations away from the countryside, and as residents congregated in suburbs and cities.[1] This recovery is also due to concerted and accelerating land conservation efforts by individuals, land trusts, conservation organizations, and state agencies.

In these early years of the 21st century, however, forest expansion is leveling-off and new development, associated with sprawling migration away from urban areas, is eroding previous gains, nibbling relentlessly at the edges of productive forests. About 40 acres per day of open space are converted to housing and commercial development in Massachusetts.[2] At the same time, Massachusetts is producing locally only 6% of the wood it consumes for construction, and harvests less than a third of the available board feet of timber growing in its forests annually.[3] The same conservation organizations that have protected thousands of acres of forest in the state now have an opportunity to encourage prudent land use by demonstrating the cultural, economic, and ecological values of working forests to the public.

This report profiles the forest stewardship activities of the Mount Grace Land Conservation Trust, which has facilitated the protection of 20,000 acres in the 23-town region of north-central Massachusetts called the "North Quabbin" for the large reservoir it borders. Encompassing 500,000 acres, Mount Grace's service area comprises one tenth of the land area of Massachusetts, and the vast majority of it is forested. Approximately 40% of this region's land base is under conservation protection, and Mount Grace has protected 10% of these acres. Mount Grace is unique among hundreds of land trusts in southern New England in that it actively manages forests, in part, for timber on its conservation properties. As such, the organization can serve as a practical model for other land trusts and conservation organizations that want to promote both the protection and sustainable use of forests, and to raise additional income from ecologically sustainable timbering practices. Using three case studies, we discuss the evolution of Mount Grace's flexible forestry philosophy, its relations with landowners and foresters, and some of the challenges inherent in stewarding forests.

A History of Mount Grace Land Conservation Trust

Beginnings

In 1986, a group of local citizens came together to discuss their concerns about the rapid, haphazard development that was taking place on the remaining productive farm and forest land in the North Quabbin. This group, led by Keith Ross, a professional forester, met for seven months to discuss strategies for stemming the tide of this sprawl. The group soon decided to incorporate as the Mount Grace Land Conservation Trust. The name honors Mount Grace in Warwick, a 1,600-foot-high mountain and site of one of Massachusetts' oldest State Forests (established 1921).

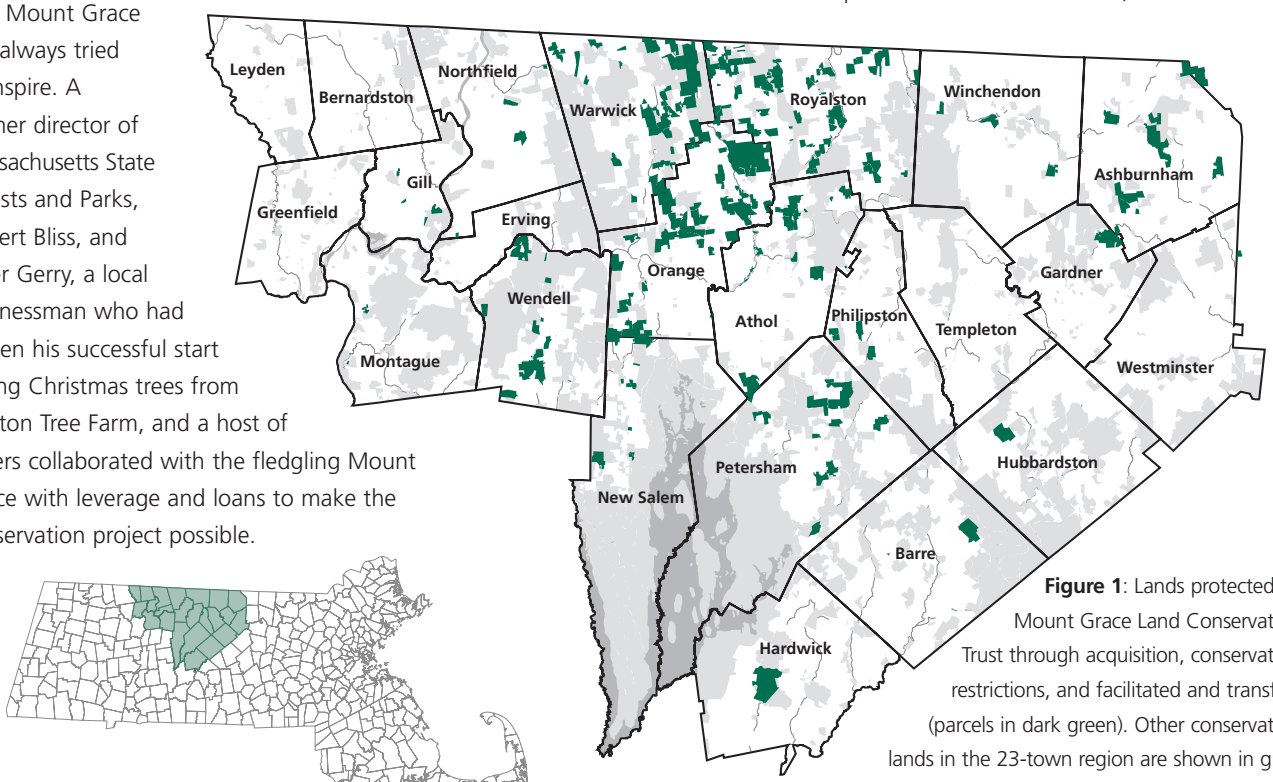
Mount Grace's first land protection project involved purchasing the Lawton Tree Farm in Athol, a 365-acre parcel then slated for a 200-houselot subdivision. The Athol Board of Selectmen assigned their right of first refusal (see Influence of Chapter 61 Legislation, below) of the property to Mount Grace, which borrowed the funds to purchase the land. Mount Grace then sold the Lawton Tree Farm to the Massachusetts Department of Environmental Management, which designated the site the Lawton State Forest. It is fitting that this banner project protected a working tree farm, which still provides timber today. And it is emblematic of the cooperation that Mount Grace has always tried to inspire. A former director of Massachusetts State Forests and Parks, Gilbert Bliss, and Peter Gerry, a local businessman who had gotten his successful start selling Christmas trees from Lawton Tree Farm, and a host of others collaborated with the fledgling Mount Grace with leverage and loans to make the conservation project possible.

Elizabeth Farnsworth

Lawton Tree Farm, now a Massachusetts State Forest, underwent a timber harvest in 2006.

Growth

Beginning in 1986, the Mount Grace Land Conservation Trust grew consistently in scope and activity. Within its first decade, Mount Grace had come to own nearly 800 acres of land, and it had protected another 1,500 acres with conservation restrictions (CRs; analogous to "conservation easements" in other parts of the country). Mount Grace had also facilitated the protection of still another 6,500



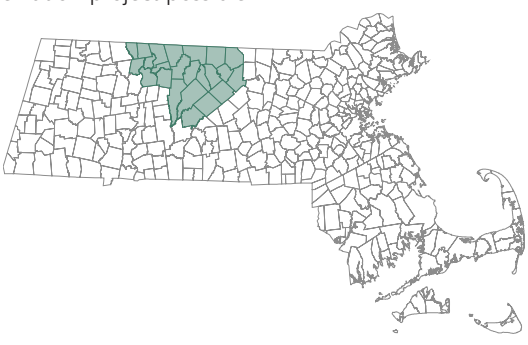


Figure 1: Lands protected by Mount Grace Land Conservation Trust through acquisition, conservation restrictions, and facilitated and transfers (parcels in dark green). Other conservation lands in the 23-town region are shown in gray.

acres, usually by stepping in quickly to purchase parcels and subsequently conveying them to a conservation agency or conservation-minded private buyer. By 2006, the year of its 20th anniversary, Mount Grace had protected 20,000 acres of north-central Massachusetts. It owns and manages 19 conservation areas, totaling approximately 1,500 acres. It holds and monitors CRs on another 39 properties, totaling about 3,800 acres, and has facilitated the protection of nearly 14,700 acres more.

These impressive accomplishments were made possible at the outset by the early guidance of Keith Ross, in cooperation with a dedicated volunteer board. From the beginning, the Mount Grace board has been endowed with abundant professional expertise and energy, including forestry biologists, an owner of a local lumber yard, builders, attorneys conversant in land-use law, consulting ecologists, environmental educators, and residents of long standing in the North Quabbin community. The nearby Harvard Forest (a research station of Harvard University located in Petersham) was—and continues to be—a source of research data and a valuable conservation partner. By 1994, board membership at Mount Grace had swelled to fifteen; a Director of Land Protection and a Land and Office Manager comprised the paid staff, and a volunteer filled the role of Membership Coordinator.

Notably, in 1996, the Massachusetts Forest Stewardship Program awarded Mount Grace a Forest Stewardship Certificate, recognizing the organization's "commitment to a land stewardship ethic that focuses on wildlife habitat, water quality, soil productivity, wood production, recreation and aesthetics as a valuable legacy for future generations."

Forest Legacy

In 1996, Mount Grace received its first of four grants to date from the Forest Legacy Program of the USDA Forest Service to protect forest lands. The Forest Legacy Program is "a partnership between States and the USDA Forest Service to identify and help conserve environmentally important forests from conversion to nonforest uses."[5] Conservation easements provide the primary tool for protecting these significant forests, and the federal government can fund up to 75% of program costs; the remaining 25% or more is raised from state, local, or private sources.[5]

Mount Grace completed three Forest Legacy projects in succession, protecting single-ownership parcels of several hundred acres each—large properties by the standards of southern New England. Following on the success of the Tully Initiative (see below), Mount Grace partnered with Harvard Forest, founder Keith Ross (now a private consultant with LandVest working for Harvard Forest), and the Commonwealth of Massachusetts to submit the first application ever to involve multiple landowners operating at a landscape scale. The Quabbin Corridor Connection project proposed by Mount Grace was ranked third in the nation out of 84 applications, and first in the state by the Massachusetts Forest Legacy Committee. This grant provided $2.5 million to enable 20 different landowners to protect forested parcels totaling over 2,000 acres. Today, several projects have already achieved closure.

Pam Kimball-Smith

John O'Keefe of Harvard Forest showcases the Wilson Tract, recently conserved by Mount Grace, Harvard Forest, and the State of Massachusetts under the Forest Legacy Program.

The Tully Initiative: A Watershed Event for the Trust

Major staff expansion occurred in 2001, with the advent of the Tully Initiative—an ambitious regional land-protection effort spearheaded by Bob Durand, then Secretary of Environmental Affairs (EOEA) in Massachusetts. Centered on the sparsely-populated watershed surrounding Tully Lake

and Tully Mountain (Orange, Warwick, Royalston, and Athol), this project spurred the protection of over 9,100 acres, involving 104 land deals in two years.[4] This effort placed unprecedented demands on Mount Grace personnel, and led to a doubling of staff from two to four. Leigh Youngblood led the Tully Initiative on behalf of Mount Grace, with help from a full-time Documents Manager. A Land Protection Specialist handled other conservation projects, and the Land and Office Manager managed administration. The new positions were retained following the Tully Initiative, but were redefined to meet new needs, including increased land stewardship.

Part of the Tully Initiative's success lay in the appealing outreach made to local landowners: materials mailed to hundreds of landowners stressed that easements would allow for continued forestry or agriculture to occur on private lands. Simultaneously, innovative new language for conservation restrictions was developed by Mount Grace and EOEA in collaboration with Glenn Freden and Richard Corser (a professional forester and logger, respectively, and local landowners in the area). This language permits a range of timber uses at high standards of stewardship and best management practices (see Appendix I), entailing access for regular monitoring. As the Tully Initiative concluded, the North Quabbin Bioreserve was created: one of the largest unfragmented blocks of managed and unmanaged forest in Massachusetts.

Pam Kimball-Smith

Hikers celebrate the dedication of the Tully Loop Trail and the success of the Tully Initiative.

Following the success of the Tully Initiative, the staff at Mount Grace has expanded to a current group of 11.5 full-time equivalents, of which a full-time position is dedicated to land stewardship. Fifteen board members continue to lend their expertise to decision-making and the development of general policy including forest management (incidentally, one also currently serves as President of the Massachusetts Forestry Association). Mount Grace also benefits from a continuing professional association with private consulting forester Glenn Freden, who began advising the organization about sound forest stewardship more than a decade ago. Together with the Stewardship Biologist, he evaluates the forest resources on new lands considered for acquisition by the land trust, and prepares most of the Forest Management plans required under Massachusetts' Chapter 61 regulations. In developing forest management plans and timber sales for local landowners, Freden also educates individuals about conservation options; these independent outreach efforts have frequently resulted in land protection.

"Mount Grace had been well known and well respected in the area for years before the Tully Initiative. Local landowners are somewhat wary of state government involvement ... so having a trusted local non-profit organization as the 'face' of the initiative made the project much more palatable to the landowners."

—Kristin Foord, Executive Office of Environmental Affairs

Evolution of Mount Grace's Land-use Decision-making

Local Attitudes Toward Forestry

The attitudes of local landowners to forestry reflect the North Quabbin's long history of forest use. Colonial settlers moved into the region in the 1730's[6] and promptly began clearing and utilizing forests for agriculture and building. The population of the 23 towns grew to about 20,000 by 1825,[1] and forest cover dropped to an historical low of ~40% by 1875.[7] As forests have rebounded over the past century, logging has continued on privately-owned woodlots. The majority of North Quabbin inhabitants obtain at least a portion of their income from subsistence on the local landscape—farming, livestock, and forestry.[9] Privately-owned forest parcels average about 40 acres in size, and the majority (67%) of private landowners live on-site in the region.[9] In the Worcester Plateau generally, 1.4% of

forest area has been harvested annually between 1985 and 2005, with white pine and hardwoods comprising over 50% of the harvest.[10] A minority of today's population of approximately 124,600 people are employed in the manufacturing businesses of Orange and Athol; others commute or telecommute to commercial centers like Amherst, Worcester and Boston. Median per capita incomes for the 23-town region average only 76% of the statewide average, and 17 of the 23 towns rank in the lowest quartile for the state.[8]

Elizabeth Farnsworth

Healthy regeneration of pine and spruce is taking place at the Paul Dunn Woodland Preserve.

With deep, often multi-generational roots in hardscrabble North Quabbin soils and a traditional, self-sufficient work ethic, local landowners largely believe that forests should provide economic as well as aesthetic and ecological resources. As such, most of the conservation-minded landowners who have worked with Mount Grace have been receptive to the idea of allowing sustainable, income-producing timber-harvesting on their lands.

Influence of Massachusetts Chapter 61 Legislation

State legislation has given private landowners another incentive for conserving and managing forest lands—particularly Chapter 61, the Forestland Act, passed in 1973 and amended in 2006. Together with Chapter 61A (the Farmland Assessment Act) and Chapter 61B (the Open Space Act), this "Forest Tax Law" requires cities and towns to reduce assessments of forest, farmland, and open-space, contingent upon the owners committing to keep their lands in one or more of those uses.[11] Landowners benefit from reduced property taxes (approximately 75–95% reduction of assessment) as well as continued income from their working lands. The legislation also grants towns rights of first refusal to acquire parcels that have been enrolled in these programs, if the parcels are to be sold for or converted to other uses. If a municipality cannot act to match the buyer's offer, or—when no *bona fide* offer is made—purchase the parcel at fair market value within a 120-day period, it may assign its right of first refusal to a qualified conservation organization. In these cases, land trusts like Mount Grace can often move quickly to protect the land.

Properties with contiguous forest of at least ten acres may apply for Chapter 61 status. A Forest Management Plan spanning ten years must be submitted and approved by a Massachusetts Department of Conservation and Recreation forester. (This can be upgraded to a Forest Stewardship Plan, which includes extra provisions, for example, for creating wildlife habitat.) This plan must be updated every ten years, with documentation of all forestry activities occurring on the land since the last filing. If selling the land to another owner who will convert the property, or withdrawing a portion of the property from Chapter 61 status, the owner must pay a conveyance tax. No penalty is levied if the subsequent owner commits to maintaining the land in Chapter 61, 61A, or 61B status or if the land is sold to a non-profit organization (the non-profit pays the tax if it sells the land for another use within five years).

As of March, 2007, Chapter 61 legislation has been revised substantially.[12] The changes adopted under the new amendment (Chapter 394 of the Acts of 2006) include: allowing landowners to switch enrollment of their land flexibly from one Chapter to another; eliminating application fees; allowing both the town and the landowner to have the land appraised during the exercise of rights of first refusal; making tax assessments more consistent among the different Chapter categories; removing stumpage tax payments on timber sold; allowing pasturing and commercial horse-riding and boarding; and permitting forestry on Chapter 61B lands.

A state-approved Forest Stewardship Plan exists for approximately 65% of the total land acreage Mount Grace owns (approximately 948 acres) and 97% of these 1,500 acres are enrolled in one of the Chapter 61 programs.

Conservation Restrictions & Forestry

Conservation Restrictions and Chapter 61 status provide complementary mechanisms for the stewardship of land.

Mount Grace often recommends adopting both approaches when working with landowners. Chapter 61 status can augment the property tax benefits that private landowners already enjoy with a CR. Likewise, municipal assessors are familiar with the easy-to-use assessment formulas for Chapter 61 lands. If a landowner eschews Chapter 61 status, however, the language inherent in standard CRs utilized by Mount Grace can incorporate flexible options for forestry. Reserved rights for the landowner frequently include timber harvesting, cutting for cordwood, and management to reduce the impacts of invasive species (see Appendix I for sample language).

Mount Grace's Forest Stewardship Approach

The existence of legislative incentives for sound forestry, plus the flexibility of CR language allows Mount Grace to provide many conservation and stewardship options for forest landowners. Likewise, Mount Grace is a peer landowner in the region, with a long track record of forest stewardship on their own lands. By choice, the organization pays taxes on its lands, benefiting the tax rolls and fostering good relations with local municipalities. Thus, Mount Grace is accorded a great deal of credibility in working with private landowners.

When working with landowners to establish a CR or to acquire land, Mount Grace considers it paramount to understand and respect the landowner's expressed wishes for the land, and to offer concrete examples of the benefits of forest stewardship based on its own land management experience. Often, the process of drawing up a Forest Stewardship Plan, with its detailed maps and description of habitats and resources, is very informative for the landowner (in this way, the Massachusetts Forest Stewardship Program has been able to raise landowner awareness in very beneficial ways). If Mount Grace will become the owner of the land, the assumption at the outset is that some form of forest management (including enrollment in Chapter 61) will take place, in order to generate income for future stewardship. However, that assumption is tailored to the specific intentions and philosophies of individual landowners and to the natural properties of the land. According to

Pam Kimball-Smith

Glenn Freden (right) and Bruce Spencer (second from left) educate landowners about integrating timber and wildlife management.

Leigh Youngblood, the message conveyed to potential CR landowners is that "You don't have to manage, but if you choose to, we encourage you to do it well."

Mount Grace staff visit all land under consideration to assess potential stewardship needs for the property. Together with the Land Committee of the Board of Directors, staff undertake a qualitative cost-benefit evaluation of potential conservation areas before adding a new property to the conservation portfolio. The value of the land for habitat (e.g., for rare and common species) is weighed against the projected returns from forestry operations, and the appropriateness of various cutting options is evaluated in light of the unique ecology of each parcel.

"Mount Grace's mission includes being a good steward of our own land, which means learning more about the areas we are protecting. Students from the University of Massachusetts and Antioch University of New England have volunteered with Mount Grace in order to gain valuable experiences with land management, conservation restriction monitoring, grant proposal writing, GIS analysis, and conservation planning."

—Keith Ross, former president,
Mount Grace Land Conservation Trust

Skyfields: Showcasing Trees and Forest Management

History

As both the staff and conservation activities of the Mount Grace Land Conservation Trust burgeoned over the years, so did the need for a large and permanent headquarters. Since 1988, Mount Grace staff had occupied a modest cottage surrounded by their Chisholm Conservation Area in New Salem. In 1998, a fortunate opportunity for a new headquarters arose. Margaret ("Peggy") Power-Biggs—widow of the world-famous organist, E. Power-Biggs, and a music scholar in her own right—owned "Skyfields:" a 150-year-old farmhouse on 40 acres just north of Athol center. A native of Greenfield, Massachusetts, Peggy found the property "a refuge—peace and quiet from the busyness of city life in Cambridge." She began to collaborate with Mount Grace to ensure permanent protection of her land.

Lay of the Land

The land surrounding Skyfields, formerly the Willis Farm for many generations, is a matrix of open fields, wetlands, and forest that was long used for a combination of agriculture and wood harvesting. Since the 1930's, when active farming was abandoned there, the fields have been reverting to a species-rich mix of old-field and wet meadow vegetation, but many acres remain largely open. Soils are moist to wet throughout the property, with numerous small drainages. The Lawton State Forest abuts the Biggs property to the east, greatly increasing the overall acreage of contiguous protected land in the area. Rolling hills slope gently down from east to west toward the Tully River, providing connectivity from the State Forest to lands conserved in the Tully Initiative.

Forestry

With a life-long interest in gardening and trees (she volunteered at the Arnold Arboretum in Jamaica Plain, Massachusetts), Peggy began working with Glenn Freden in 1998 to organize a timber sale. A previous harvest had occurred in 1981, followed by strong hardwood and softwood regeneration. Freden developed a Forest Stewardship Plan under Chapter 61, encompassing 30.6 acres of the land. A notice of timber showing was sent to 21 companies in Massachusetts, New Hampshire, and Vermont; the winning bid was submitted by a family-owned mill in Vermont. A total of 308 trees, including 85.6 thousand board feet (mbf; a board-foot is 12 inches x 12 inches x 1 inch of wood) and 30 cords (a cord is 128 ft^3 of wood) of primarily white pine and red oak, was harvested by early 1999. Proceeds from the timber sale were donated through the Living Endowment Program of Mount Grace.

In 1999, Peggy willed the farmhouse and surrounding acres to Mount Grace, after conveying a conservation restriction to the Millers River Watershed Council. She specified that a portion of the open fields be converted to an arboretum "of primarily native trees and shrubs, particularly including uncommon species." Together, the arboretum and the active forestry at Skyfields would become a living showcase of both prudent land management and public education. How appropriate, then, that Skyfields—just a stone's throw from their first conservation project—would become Mount Grace's new headquarters.

"My hope for the future is that the land will become a welcoming and restful place for everyone who wishes to visit; a place to learn and to study—whether trees, stars, birds, or butterflies—for people of all ages. And because Skyfields will be open to all residents of the North Quabbin area...Skyfields will be truly by and for the people."

—Margaret Power-Biggs[13]

After receiving Skyfields in 1999, Mount Grace hired a local landscape architect, Mollie Babize, to design the arboretum. By 2006, dozens of existing trees had been marked with educational signage that highlights their uses for wildlife and people, and many new plantings were installed. The rich soils are conducive to high species diversity, so a broad spectrum of plants are


Pam Kimball-Smith

Three generations help plant trees in the Skyfield Arboretum.

featured—from shadbush to shagbark hickory. This diversity further enhances the variety of insect, bird and mammal species that frequent the fields. For example, a two-hour "BioBlitz" survey conducted in June, 2006 documented several hundred species of plants and animals.

Seven years following the timber harvest in the western stands at Skyfields, tree recovery is excellent, with extensive growth of white pine saplings. In 2006, volunteers from the national environmental organization, the Student Conservation Association, established a hiking trail that winds through the forested portion of the property. Named the "Willis Woods" trail, it honors the family that built the original farm. Trail users would be hard-pressed to locate old logging roads and landings, but they (and birds and bear) can stop here and there to sample raspberries and blueberries that share some of the small clearings with regenerating pine and oak. Future goals include thinning 3- to 4-inch-diameter maples to encourage pine growth, and continued mowing to maintain early-successional habitat and discourage establishment of invasive plant species in the open fields.

Through her generosity, Peggy Power-Biggs exemplified a long-term conservation vision and a pragmatic strategy of sustainable and income-producing land use. Today, Mount Grace Land Conservation Trust carries on this legacy, demonstrating first-hand that conservation and timber management are mutually compatible aims.

Arthur Iversen Conservation Area: Balancing Forestry with Biodiversity and Land Uses on Adjoining Properties

History

As Mount Grace's largest Conservation Area, the 511-acre Arthur Iversen Conservation Area (AICA) in Warwick is a flagship for the organization. AICA embodies the collaborative principles developed by Mount Grace; land protection has come about through the cooperation of multiple local landowners, the Commonwealth of Massachusetts, the Massachusetts Audubon Society (MassAudubon), and the Sweet Water Trust. Protection activities began when Myra Iversen of Warwick gave 26 acres as a gift to Mount Grace in memory of her husband, Arthur, and sold an additional 49 acres to other buyers with CRs in place in 1990. Assisted by donations from Mrs. Iversen, Mount Grace bought two adjoining parcels of 68 and 34 acres in 1991 and 1993 from the Spackman and Savory families, respectively. An additional 491 acres were purchased from three families in 1993 and 1994. Additional funds to support these protection projects came from individual donors and the sale of 108 of these acres to the State as an addition to the Warwick State Forest. In June 1995, Mount Grace sold a CR on the remaining newly-acquired 383 acres to the Massachusetts Department of Conservation and Recreation. In 1996, a grant from the Sweet Water Trust enabled MassAudubon to purchase an overlapping CR, allowing Mount Grace to complete payment for its acquisitions. This CR prohibits timber harvesting, hunting, fishing, trapping,

and the use of motorized off-road vehicles. Of the original Iversen, Savory, and Spackman lands 128 acres are not covered by the MassAudubon CR. In the years since, Mount Grace has worked to protect additional abutting lands through CRs and the Agricultural Preservation Restriction (APR) program, (which sustains lands in farming production).[14]

Lay of the Land

The Warwick State Forest adjoins AICA to the south, and other portions of the State Forest lie just to the west and north (with connections through CR and APR land). Thus, AICA provides an important wildlife corridor, connecting over 2,500 acres of forest in this sparsely populated town (762 residents).[15] AICA lies at the core of a large forest block reaching from the Quabbin Reservoir north to central New Hampshire. Expansive forest blocks like this are rare in southern New England, and provide critical habitat and watershed protection; hence, this block has been identified as a high priority for conservation by both The Nature Conservancy and the Quabbin-to-Cardigan Collaborative,[16] and for "Wildlands" designation by the Wildlands and Woodlands project of the Harvard Forest.[17]

In addition to its value in linking contiguous forest blocks, AICA contains several special natural communities within its forest matrix. Unusual bedrock types come together beneath AICA, which lies atop the tumultuous folding of the Bronson Hill Fault.[18] A mélange of Silurian schists meet granites of the Warwick Dome (with intrusions of soapstone and other uncommon rock types), creating undulating topography within the Conservation Area. Hodge Brook tumbles through a dramatic fault and ridge line in the western half of the property, forming the "Devil's Washbowl" waterfall at the head of a gorge. Enormous boulders and talus deposited by glaciers punctuate the landscape. Rich, mesic soils support the growth of large trees (dominated by hemlock, beech, and sugar maple) and a diverse array of herbaceous species. Several vernal pools occupy small valleys on the property. A combination of beaver damming and ridge and valley topography has created several notable wetlands, including acidic shrub and graminoid fens, a kettlehole bog, and a spruce-fir boreal swamp—a rare natural community type in Massachusetts. The diversity of plant communities, unfragmented forest, abundant water, and denning sites creates habitat for a wealth of wildlife at AICA, according to an inventory completed by noted tracker, Paul Rezendez.

Forestry

The complex mix of significant ecological communities in AICA, together with the complex mix of CRs on various portions of the property, complicate the prospects for conducting forestry on the land. Much of the AICA land had been managed for timber in the past. A cut for timber and cordwood in the 1970's removed poor-quality stems and "left a significant stocking of mature overstory trees of good quality."[19] Thus, many large trees, including white pine, hemlock, and a rich mixture of many hardwood species, now predominate. Most of the AICA land was initially enrolled in the Chapter 61 program, with the intent to conduct timber cuts that would bring revenue to Mount Grace and demonstrate sound forestry to the public. Although most of the land is now classified as Chapter 61B, the 128-acre sector not covered by the MassAudubon CR remains in Chapter 61. A Forest Stewardship Plan was completed in 2001 for this parcel, proposing removal of up to 144 mbf and about 300 cords of wood. The potential is promising for conducting forestry, using both traditional techniques and processors/forwarders to harvest commercially for pulpwood. Unfortunately, the area proposed for harvest is "landlocked" by surrounding CR land (on which crossing for timbering purposes is prohibited), steep slopes, and by private abutters who have denied easements for accessing AICA and transporting and landing logs. Thus, despite extensive negotiations with abutters and conservation partners, there is no current option to transport forest products off the property. Although timber cuts can be accomplished with low impact, it can be challenging to change negative public attitudes toward forestry.

Herein lies an unusual dilemma for a land trust that has built a reputation for active forest management. Several options exist, and are being explored. First, the remaining land currently classified under Chapter 61 could be transferred to Chapter 61B status. This step has now become much easier with the adoption of the new Chapter 61 amendments (see above). Another option is to undertake a more modest thinning *in situ* without removing logs, mainly to create openings to foster future regeneration and to create more diverse wildlife habitat. This step carries its own labor costs, and also needs to be considered carefully in the context of the existing natural resources on the property. Although a few previous surveys have documented large wildlife and unusual natural communities at AICA, there is little comprehensive information on the locations and extent of rare plant and animal species that may be affected by particular forestry operations.

More information on the ecology of AICA is needed to inform a sound decision regarding forestry that accounts for both site limitations and the management intentions of former landowners and CR holders. Fortunately, the North Quabbin region is replete with people who have ecological expertise and are willing to volunteer their services in the field or to offer them at nominal fees. An inventory is proposed for summer, 2007, which represents an opportunity for Mount Grace to mobilize its own Board, Stewardship Committee, and a large group of interested volunteers for this effort. The data gathered will comprise the most comprehensive and systematic body of ecological information ever compiled by Mount Grace for a Conservation Area, and some of the only such in-depth data gathered by any land trust of a comparable size. Although some national and state-wide land trusts with significantly larger endowments regularly conduct such surveys, most regional and municipal land trusts do not possess the resources to do so. Once again, Mount Grace shows how volunteerism, research, public education, and forestry can go hand in hand as AICA becomes a demonstration-in-progress of rigorous, scientifically-informed forest stewardship.

Earle Baldwin

Large trees and diverse ferns surround the Devil's Washbowl formation, one of the many special habitats in the Arthur Iversen Conservation Area.

Corey-Ganson (CR): Partnerships with Private Conservation Buyers

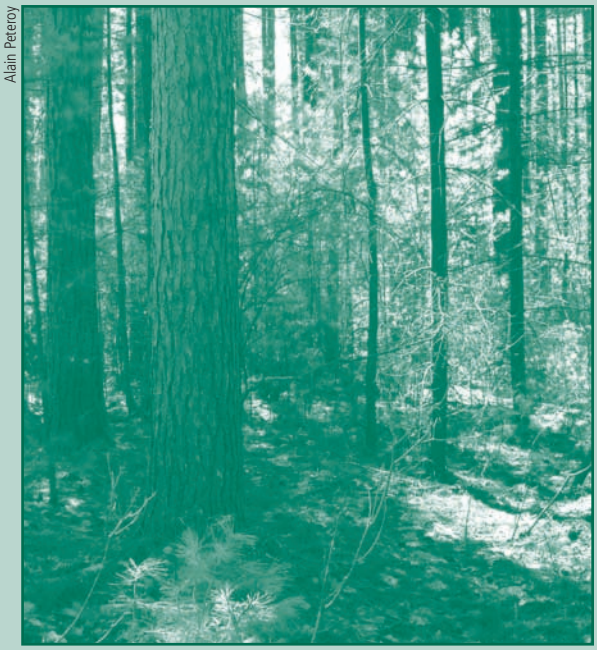
History

This case study highlights the accomplishments that are made possible by multiple partnerships among private landowners, conservation organizations, and "conservation buyers" (individuals who purchase land with an intent to protect the land, usually with a CR). In 2003, The Trustees of Reservations (Massachusetts' oldest state-wide land trust) negotiated with the Ganson family in Petersham to purchase and conserve five parcels, working jointly to fundraise for the effort with Mount Grace. Subsequently, a portion of the land was put up for sale with CRs in place that are held by Mount Grace. Roger Corey, an abutter who had grown up on land adjacent to the Ganson property, bought two of the five parcels, amounting to 112 acres. Subsequent to the purchase, the CR land was enrolled in the Chapter 61A program, with the stated goal to "maintain and improve the capacity of the land to produce forest products [and] provide wildlife habitat and passive recreation."

Lay of the Land

The property now owned by Roger Corey encompasses 80 acres of productive forest, interspersed with 32 acres of wetlands, beaver ponds, and streams that flow into the Swift River (which itself is a major drainage into the Quabbin Reservoir, the main drinking water supply for Metropolitan Boston). The land is designated as Critical Supporting Watershed by the Massachusetts Natural Heritage and Endangered Species Program.[20] Bordered to the east by the Harvard Forest (some 3,000 acres owned and managed by Harvard University's research station), and situated within one mile of the extensive holdings of the Metropolitan District Commission and other conservation lands, this land forms part of one of the largest unfragmented forests in Massachusetts, including a contiguous roadless area of 1,500 acres.[21] An extensive network of stone walls and wire fence testifies to the agricultural history of the land.

Alain Peteroy



The land conserved by Roger Corey and Mount Grace harbors several stands of large timber.

Forestry

Today, large, mature white pine, red oak, red maple, and mixed birch, with abundant mast, are the legacy of prudent forest management in the past. A modest timber harvest that took place approximately 15–20 years ago removed a large percentage of lower-quality growing stock, leaving a remaining stand with increased vigor and growth rates.[22] Given the high quality of the existing stands, the income potential from forest harvesting is strong. Glenn Freden and Kevin Scherer have worked with Roger Corey to devise a Forest Stewardship Plan (under Chapter 61) and a Forest Cutting Plan, involving about 148 mbf and 150 cords of firewood. Because the land lies within an envelope of estimated habitat of rare wetlands wildlife, cutting will be located sensitively to avoid damage.

Roger Corey observes, "the Chapter 61 tax break was a pleasant surprise! I didn't know about that at first when I decided to buy the land, but I am glad it's there to encourage more land conservation. It requires a forest management plan, and that is an important, valuable impetus to landowners to use it wisely. Wasted renewable resources help no one."

"The land also has significant environmental benefits. It has water (standing, as well as flowing), it has trees, both new and vibrant and old and crumbling, which provide benefits to wildlife. It has great blue herons, otters, beavers, frogs that kept me awake at night in my youth, turtles, wintergreen to pick and eat along the pathways (everything but fish—I know, I've tried). I know my family, some of my neighbors, and the occasional hunters truly value that land. I can't help but think others value it too, and it makes me feel good knowing that those benefits will be preserved."

—Roger Corey

Synthesis: Lessons Learned from the Mount Grace Experience

Just as the twentieth century witnessed the prodigious regrowth of forests in the northeast, the twenty-first century will see changing times for forest lands and land conservation activities in this region. Land trusts have to be flexible and aware of new strategies for stewarding and benefiting from their forest holdings. They must respect the choices of the private landowners with whom they work, and recognize that land protected under CRs or Chapter 61 will change hands through sales and bequests over time. The New England climate, always famous for its vagaries, is changing, too, and global warming will bring new ecological challenges for forests. Markets for forest products are shifting, in some cases shrinking, in others migrating to other countries. The lessons learned by Mount Grace over twenty years of land protection and management can help inform the ways in which both land trusts and private landowners approach the future.

Honoring Management Mandates from Prior Owners in Stewarding Conservation Areas

When Mount Grace agrees to acquire land to add to its growing portfolio of conservation areas, the trust assumes new responsibilities for forest management. In 2004, the national Land Trust Alliance adopted thorough standards and practices to which all land trusts are expected to adhere in managing the lands they own.[23] Land trusts need to ensure that dedicated funds exist to cover stewardship costs. Management strategies and permitted public activities should not threaten conservation values, and should advance learning and demonstration purposes. Likewise, Mount Grace recognizes that any plan for managing the land must reflect the prior owner's intentions for the property, while striving to generate funds for future stewardship. Sometimes, an owner has a clear vision for the land that involves prudent forestry, public access, and educational outreach. Most often, Mount Grace works in partnership with the landowner, offering a range of management options, to help develop and refine a long-term strategy.

Helvi Frilander of Phillipston, Massachusetts, for example, created a wildlife sanctuary by donating 52 acres to Mount Grace in 1989. During the donation process, the land was simultaneously enrolled in Chapter 61; thus, when Mount Grace acquired the land the property tax reduction was already in place, lowering the stewardship costs for the land trust (this can be an advantage for land trusts generally). The Stewardship Incentive Program (SIP)[24] of the U.S. Forest Service provided cost-share funds with which to develop a Forest Stewardship Plan. A plan for a one-acre patch cut to enhance wildlife habitat was conceived by University of Massachusetts forestry students. Children from the Phillipston Memorial School came up with an apt name for the new conservation area: Fox Valley Wildlife Sanctuary. Ten years later, an adjoining neighbor, the Hazeltine family,

Pam Kimball-Smith

An enthusiastic participant at the dedication ceremony for the Fox Valley Wildlife Sanctuary; current and future generations will benefit from this working forest.

"A lot of forest management involves delayed gratification … it is a long-term proposition. There has to be a measure of trust between the landowner and the forester."

—Glenn Freden, Consulting Forester

was inspired to donate their land to Mount Grace and also simultaneously entered the parcel into Chapter 61. Today, over 100 acres are protected, with public trails meandering along tributaries and wetlands of Popple Camp Brook and among the fern glades, boulder fields, mixed-age stands, and large trees of the upper slopes.

The wishes of landowners or the objections of abutters can constrain the types of uses that Mount Grace can pursue on its land—such dilemmas have limited forestry on the Arthur Iversen Conservation Area, for example. Likewise, while hunting is generally allowed on Mount Grace lands, it is not permitted at Fox Valley. However, recent improvements to the Chapter 61 program enable Mount Grace to respond to changing attitudes (and to new ecological information) by flexibly redefining their uses of land while still minimizing costs or accruing a modest income for stewardship.

Protecting Land Across the Generations: Challenges of Maintaining Conservation Restrictions Under Changing Ownership

Conservation Restrictions are excellent tools for helping private landowners conserve their land while retaining certain usage rights and enjoying tax benefits. The number of acres nationally with CRs in place has increased exponentially since the 1970's and, in New England, over 500 land trusts hold CRs on about 3 million acres.[25] While the spirit of a CR reflects a desire to protect land in perpetuity from development, their current effectiveness and future persistence is contingent on two factors: 1) compliance with the CR will be ensured through careful monitoring and enforcement by the entity holding it; and 2) if the land is sold or bequeathed to the next generation, future landowners will uphold the requirements of the CR. To address the first issue, helpful guidelines for rigorous baseline documentation and standardized monitoring techniques have been developed by MassAudubon, which lay the groundwork for identifying violations and enforcing CR terms.[26] But many land trusts are beginning to grapple with the second, thornier issue, as land with existing CRs changes hands or enters its next generation. The average age of a forest-owner in Massachusetts is 60 years, and property turnover is inevitable.[27] With each new owner comes a need to explain clearly the terms of the CR and to inspire the owner to comply. Land Trust Alliance standards and practices require that all land trusts: "strive to promptly build a positive working relationship with new owners of easement property and inform them about the easement's existence and restrictions and the land trust's stewardship policies and procedures; ...establish and implement systems to track changes in land ownership; and ...have a written policy and/or procedure detailing how [they] will respond to a potential violation of an easement, including the role of all parties involved (such as board members, volunteers, staff, and partners) in any enforcement action."[23]

To date, Mount Grace has handled about fifteen CR land transfers; fortunately, few violations of CRs have occurred. In part this is due to active outreach; Mount Grace tries to maintain regular contact with landowners, keeping them on mailing lists to apprise them of Trust activities. Likewise, private landowners have generally conducted sound forestry on their CR lands. Frequently, Glenn Freden and other highly-qualified foresters have been able to offer expert consultation to the private landowners who are seeking timber income from their land. Mount Grace also maintains a regular schedule for annually monitoring CRs, and invites landowners to participate in the monitoring process. It is critical during these visits to renew good working relationships with landowners, and also to be aware of land use practices (e.g., logging or development) on abutting lands that can impinge on the CR parcel.

Forestry and Public Access

Forest harvesting can significantly increase the income available to steward conservation lands. At the same time, logging roads and skid trails can inadvertently open up land to unplanned public access. Many land trusts contend with unauthorized uses, such dumping, all-terrain vehicle (ATV) traffic, or squatting on their lands that can diminish the conservation value of the property or damage walking trails. Clearly marked trails, regular monitoring, and public education are key to averting some of these challenges.

The Paul Dunn Woodland Preserve, a conservation area of Mount Grace, provides an example. Set amidst a dense and rapidly expanding residential area near Sunset Lake in Ashburnham, Massachusetts, this 166-acre property was slated for development in the 1960's. Paul Dunn purchased the land from a developer, then donated it to Mount Grace in 1991, stating that he preferred to donate the land to a trust that would actively manage the forest. The land was enrolled in Chapter 61 at the same time. The land straddles a sandy esker (a sinuous, loosely consolidated ridge deposited from the underbelly of a glacier), that overlooks extensive wetlands and is pock-marked with cool kettle depressions that support small, unusual boreal stands of red spruce, black spruce, tamarack and fir. Large white pine dominate that well-drained esker soils, and many were quite large and well-formed in 1996, when a timber cut was performed, yielding 124 mbf. Woods roads had been created originally to begin house lot construction, but now could be utilized in part for both timbering and public trails. Trails lead through formerly logged areas, which are now rich in white pine saplings. A large map at the entrance to the Woodland Preserve illustrates public trails, which are blazed to keep hikers from wandering onto disused logging roads. Mount Grace has also recently published a guidebook to its trails with descriptions and maps.[28] Over the years, Mount Grace has also recruited interested volunteers to assist with monitoring its conservation areas. This small cadre of dedicated Land Stewards helps maintain trails and reports any problems with public access to Mount Grace. The network of old roads threading through the property could pose an attractive nuisance; instead, the land is well cared-for by neighbors and recreationists.

Pam Kimball-Smith

Volunteers create trails, install signage, and monitor conservation areas; they are essential to accomplishing the conservation mission. These Americorps students have just finished building a kiosk at Skyfields.

Practicing Forestry in Changing Times: Climate, Pests, and Human Demographics

The climate of New England is changing with unprecedented rapidity, and the future of New England's forests is uncertain. Surely there will be trees, but the species occupying this new, warmer climate will likely hail from more southerly latitudes while the familiar sugar maple and spruces recede to colder northern climes.[29] Current climate models project that New England will see a 4–5ºF temperature rise in the coming century; by 2099, Massachusetts may have a climate (based on heat index) resembling North Carolina, including almost 30 days per year with temperatures exceeding 90ºF.[30]

Storm severity is also expected to increase; the number of heavy precipitation events (with >2 inches of precipitation falling in less than two days) will increase by 8–12 percent by 2100.[30] This scenario gives pause to anyone who witnessed the F2 tornado, with windspeeds of 155 mph, that touched down in Wendell, Massachusetts on July 11, 2006. That storm leveled a 2.9-mile long swath of forest, passing directly through a 73-acre parcel on which Mount Grace holds a CR. The devastation, though localized, is reminiscent of the massive forest destruction wreaked by the 1938 hurricane in central Massachusetts, the legacy of which is still visible in the thousands of square miles of even-aged, ~70-year-old stands in this region. Mount Grace is working with the CR landowner to assess the scope of the damage and to aid in recovery from the disaster. Limited salvage is

Elizabeth Farnsworth

In just a few minutes, a tornado felled acres of forest in Wendell, Massachusetts.

being done, principally to clear downed trees around the home site; the plan for the remaining forest is to observe and foster natural regeneration where possible. However, salvage logging may be more intensive on the adjoining Wendell State Forest, where a 75-acre timber sale is being planned by the Department of Conservation and Recreation.[31] It is important for land trusts not only to be ready for future storms and for longer-term climatic changes, but to account for differing adjacent land uses in planning for the restoration of a single parcel.

A warming climate has also been conducive to certain forest pests and pathogens that were historically limited by cold temperatures. Foremost among these in New England forests is the hemlock woolly adelgid (*Adelges tsugae*), a diminutive white aphid-like bug with a ravenous appetite. Infestations of these insects have defoliated whole stands of hemlock in Connecticut, and the front is moving north.[32] Salvage logging is taking place in several conservation areas and state parks throughout Connecticut, both to recover income from hemlock before populations die out, and to avert the liability that dead and dying hemlocks pose to hikers and other forest visitors. The death of hemlock will profoundly alter the species composition of Massachusetts' forests. Potentially, this could encourage growth of certain commercially important timber species, provided other pests, such as gypsy moth and the Asian long-horned beetle, do not also take advantage of changing climate. Even in a stable climate, air pollution and acid precipitation exacerbate the effects of pests on trees.[33] Land trusts must stay abreast of the ecological factors that shape the forests they protect, to maintain flexible and informed stewardship practices, and—ideally—to plan ahead with prudent forestry and proactive planting.

Along with climate change and pests, economic and demographic trends will exert the strongest impacts on the future of our forests. In Massachusetts, a distinct line demarcating forest loss is visible just west of the Route 495 corridor between Boston and Worcester's suburbs. East of this line, 11–20% of forest cover has been irretrievably lost between 1971 and 1999; west of the line, losses vary between 0 and 10%.[17] Even in this comparatively "green zone" to the west of the "sprawl frontier," however, individual landowners are making decisions daily that will affect the health and long-term viability of their forests. Overall economic indicators and state-wide trends in real estate speculation drive the impetus for private landowners to sell their land for development. Likewise, the individual choice to harvest forest products is influenced by personal wealth and median housing prices, with wealthier owners less likely to do timbering.[10]

While housing and land prices are currently in a temporary downturn, it is advisable for land trusts to move quickly to encourage landowners to both practice stewardship and conserve their land permanently. Although land protection takes place on a parcel-by-parcel basis, many land trusts are realizing that their long-term acquisitions must be coordinated with the activities of the state and other conservation organizations in order to conserve large matrix forests. In Massachusetts, this collaborative, multi-agency planning is beginning to gain momentum, with exciting prospects for conserving a total of 2.5 million acres of working and wild forests in the coming century.[16]

Living Endowment: Land and Trees as Long-term Income

Forestry will only be sustainable if it is ecologically sound and if the economy supports a market for timber. Today, 94% of the wood that Massachusetts consumes comes from outside the state, yet foresters project that local forests could supply as much as 41% of the state's timber needs.[3] Ironically, local lumber mills are shutting down after generations of operation, while much of the wood used for construction in New England is imported from eastern Canada.[3] Both regional markets and international trade policies affect the profitability of timber. The latter are a source of concern throughout the U.S.; disparities in timber trade were identified by the National Woodland Owners' Association as one of the top three forestry issues of 2006–2007.[34] Although markets for timber products are continually in flux, the relative proportions of tree species harvested in Massachusetts between 1984 and 2003 have remained quite constant over time, dominated by white pine and hardwood fuel species.[10]

Still, movements are afoot to revitalize the wood-based economy, with models emerging in western and central Massachusetts. Cooperative enterprises can link far-flung producers into a coalition that can sell more effectively and build market share. An innovative project called North Quabbin Woods has formed to: 1) market locally made wood products, promoting over 30 local woodworking businesses; 2) educate landowners about sustainable forest management; 3) train and promote Forest Guides, who offer natural and cultural history tours of the region; and 4) raise community awareness about the economic, social, and environmental roles that forests play in the region.[35] Likewise, new species of trees, such as black locust, are being investigated for their potential uses.[3] As oil prices skyrocket, biomass for fuel may increasingly drive demand for trees. Builders are endorsing the value of using wood harvested under sustainable Green Certification criteria developed by the U.S. Forest Stewardship Council.[36] By adopting these basic principles, land trusts could potentially sell their value-added timber as green-certified and simultaneously protect the conservation value of their forested lands.

Organizationally, Mount Grace includes forest stewardship income in its operating budget. While timber harvests are not scheduled annually, this intermittent source of income can be substantial. The rural character and demographics of Mount Grace's region led to the establishment of its Living Endowment Program in the late 1990's. Supporters of the land trust, particularly those that are land-rich and cash-poor, now have the option to provide ongoing support for Mount Grace's land conservation programs through a gift or bequest of land to be sustainably managed, in part, for income. Alternatively, landowners can provide support in the form of a gift of a portion of timber income from their own land. This option connects Mount Grace to the forest stewardship activities of its members. Both forms of giving through the Living Endowment Program may provide charitable income tax benefits to landowners.

The Importance of Partnerships

The lesson that Mount Grace has learned repeatedly over 20 years is that they could not do it alone. Several of the success stories profiled here resulted from innovative cooperation with other conservation organizations, state agencies, town boards, and individuals. From the beginning, Mount Grace has relied on local forestry expertise to guide their stewardship. Much of the outreach they have been able to make to local landowners was made possible by the foresters who have served as staff, on the board, and as consultants.

Before embarking on forest stewardship, it is critical to identify knowledgeable and ethical foresters who understand the unique ecology of the region in which they work. Often, these professionals will have long standing in the local community, and be well-respected among private landowners. Other times, land trusts can solicit advice from students and faculty at academic institutions, such as the University of Massachusetts at Amherst. As recently as 2006–2007, for example, Mount Grace retained a student design team from the Conway School of Landscape Design (Conway, Massachusetts) to perform a cost-benefit analysis and limited development design for 123 acres of forest in nearby Northfield. Mount Grace has benefited repeatedly by recruiting promising students to assess their lands and devise management strategies.

Pam Kimball-Smith

Outreach is key to informing the public about the values of forestry and conservation. This field trip took place just after a harvest at Mount Grace's Song Memorial Forest Conservation Area.

Mount Grace as a Model: Public Perception and Opportunities for Outreach and Education

Mount Grace's status as a landowner and property taxpayer lends the organization a high degree of credibility with other landowners when discussing land conservation and stewardship options. Mount Grace encourages land stewardship by demonstrating site-appropriate management of its own land, including ecologically sound forest management practices on portions of its conservation areas. Mount Grace invites members and the public to experience forest stewardship firsthand through guided tours of its conservation areas before, during, and after logging operations. The organizational culture of Mount Grace is compatible with the rural character of the 23-town North Quabbin area it serves, and reflects respect and sensitivity to the diverse conservation ethics held by the landowners of the region.

The stories shared in this report exemplify many of the challenges—and possibilities—that land trusts across New England and the country face in protecting and managing forestland. We hope these case studies will be useful to many other land trusts that are seeking to support long-term conservation through sound forestry.

Acknowledgments

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Pam Kimball-Smith

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Appendix I.

Reserved Rights for Forestry Under Conservation Restriction Language Developed by Mount Grace and EOEA (Sample)

1. Forestry. Commercial timber cultivating and harvesting or tree cutting conducted in compliance with the Massachusetts Forest Cutting Practices Act (M.G.L. c. 132, as amended) and associated regulations promulgated at 304 CMR 11.00, and in accordance with:
   a. Prudent and sound forest management practices;
   b. Forest Management Standards as provided in Exhibit… and incorporated herein by reference (hereinafter "Forestry Standards")[see **http://www.massforests.org/management-logging/laws-regulations.htm** for more information on applicable laws and regulations];
   c. All required best management practices;
   d. As possible, the recommended guidelines pursuant to the Massachusetts Forestry Best Management Practices Manual (Kittredge and Parker, 1996) and subsequent versions if approved by the MA Department of Fish and Game (hereinafter "Forestry BMPs");
   e. A Massachusetts Forest Stewardship Plan (hereinafter "Stewardship Plan"), approved by DCR, Division of Forests and Parks, if any proposed cutting/harvesting may exceed ten thousand ("m" = 1000) board feet ("bf") or ten cords of wood during any rolling 12-month period; and;
   f. A Cutting Plan approved by DCR, Division of Forests and Parks, under the Forest Cutting Practices Act (hereinafter "Cutting Plan"), if any proposed cutting/harvesting may exceed ten mbf or ten cords of wood during any rolling 12-month period.

Provided further that:

   g. Any Cutting Plan prepared must be consistent with the Forest Stewardship Plan, and with the terms of this CR;
   h. Owner shall conduct only those activities consistent with and authorized by the approved Stewardship Plan and approved Cutting Plan;
   i. Said Forest Stewardship Plan shall be prepared by a Massachusetts licensed Forester licensed through the Massachusetts Department of Conservation and Recreation. The Stewardship Plan must be consistent with the Massachusetts Forest Stewardship Plan Guidelines, and with the provisions of the original enabling federal legislation (section 5(f) of the Cooperative Forestry Assistance Act of 1978, 16 U.S.C. § 2103 a(f), as amended), and approved in writing by DCR, Division of Forest and Parks, in consultation with the state forester;
   j. Owner shall include a copy of this Conservation Restriction with its application to the DCR, Division of Forests and Parks, for the Division of Forests and Parks' approval of any Stewardship Plan or Cutting Plan;
   k. …A copy of any proposed Stewardship Plan or Cutting Plan must be mailed to the Department of Fish and Game's (DFG) Natural Heritage & Endangered Species Program for review…
   l. Owner shall mail a copy of any approved Stewardship Plan or Cutting Plan to the grantee.
   m. Any temporary buildings, structures, or equipment necessary to conduct permitted forest management shall be included in the Stewardship Plan for the Premises, and shall not be permitted, installed or utilized on the Premises until such plan is approved.
   n. Pesticides (insecticides, herbicides, fungicides) shall not be applied within riparian areas, and application of pesticides shall otherwise conform to the Massachusetts Forestry Best Management Practices Manual (Kittredge and Parker 1996) and subsequent versions if approved by the MA Department of Fish and Game (hereinafter "Forestry BMPs")...

4. Woods and Farm Roads: New Ways. The maintenance and use or discontinuance of existing unpaved woods roads and the construction, relocation, replacement and repair or discontinuance of new unpaved woods roads for forestry purposes with a travel surface not to exceed twenty (20) feet in width, so long as such roads are located, designed, and constructed in a manner that will minimize negative impacts on the conservation and recreational purposes of this Conservation Restriction, and are in accordance with the approved Stewardship Plan and the Cutting Plan and/or the Forestry BMPs. The Stewardship Plan must demonstrate that:
   a. The road improvements are necessary to provide reasonable forest management;
   b. The system of existing woods roads is not adequate; and
   c. Such improvements do not materially impair the purposes of this Conservation Restriction...

5. Vegetation control; Cordwood. Trimming, maintaining or replacing trees, shrubs, or other plantings in accordance with established horticultural practices, removing diseased or insect damaged trees or vegetation, controlling or eliminating invasive plant species, or removing hazards to private property or public or private health and safety, and cutting, mowing, or replacing grasses in accordance with established landscaping practices. Harvesting of trees, no to exceed 10 mbf or 10 cords of wood in any rolling 12-month period, to provide non-commercial firewood or construction materials for use by the Owner on the Premises or at its primary residence. Vegetation control and management practices shall be based on prudent and sound silvicultural principles.

Mount Grace Land Conservation Trust

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For More Information

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