

Forging a Common Vision for Maine's North Woods

by Robert J. Lilieholm



Robert Lilieholm takes stock of the challenges and opportunities facing Maine's North Woods, the largest undeveloped forested block in the eastern United States. In the face of changing ownership patterns and development pressures, there is lively debate over current land use policies and trends. Lilieholm suggests that a broader, regional vision for the North Woods might better serve the long-term interests of both the area's forests and its struggling communities. 🐉

INTRODUCTION

For centuries, Maine's vast forestlands have served as an economic and cultural mainstay for the region. Over time, the people and landscapes have changed, but the forests' central role has endured (Irland 1999). Today, Maine's woodlands are experiencing change on a scale and pace rarely before seen. From massive land sales up north, to rising development pressures in the south and along the coast, the future of Maine's forests as a working landscape open to recreationists and yielding a host of environmental services is increasingly uncertain.

Maine's North Woods represent the largest undeveloped forest block remaining in the eastern United States. And while these forests will likely endure, growing uncertainty over changing ownership and development has fueled a lively debate over whether current land use policies and trends are sufficient to sustain the forests and communities of the region. In this paper I describe the challenges and opportunities facing northern Maine, and offer some insights—as a recent resident of the state—on possible ways forward. My intent is not to offer an “answer,” for no single solution exists. Instead, I seek to take stock of where we are and where we seem to be headed, and describe how a broader, regional vision for the North Woods might better serve the long-term interests of the region's forests and communities.

MAINE'S FOREST-BASED ECONOMY

Nearly 90 percent of Maine is forested, and more than 95 percent of that, roughly 17 million acres, is classified as productive timberland, both the highest percentage for any state in the nation (NEFA 2007). In addition, more than 95 percent of Maine's timberland is privately owned, also the highest for any state.¹ The communities of northern Maine have long relied upon these forests to support the region's twin economic pillars: the forest products industry and the forest-based recreation and tourism sector. These two sectors contribute more than \$11.5 billion each year to Maine's economy and support more than 50,000 jobs. Many of these jobs in the forest products sector pay twice the state's average wage and are located in rural

areas with limited economic opportunity (NEFA 2007). In addition to these direct and indirect economic impacts, Maine's forests provide a wide range of unpriced yet increasingly valued environmental services such as soil and slope protection, clean air and water, flood control, wildlife habitat, biodiversity, carbon storage, scenic beauty, and open space for residents and visitors alike (Fausold and Lilieholm 1999).

Maine's forest products industry is comprised of thousands of firms and individuals engaged in the growing, harvesting, transport, and processing of a variety of forest products. These range from pulp and paper, to hardwood and softwood boards and various panel products. Also important are specialty wood products like dowels and tool handles, wood composites, Christmas trees, firewood, and maple syrup. And while Maine's forest products sector has experienced job losses from increased capitalization, it continues to provide about one-third of the state's manufacturing jobs, payroll, value added, and value of shipment receipts (NEFA 2007).² In fact, Maine ranks first in timber harvests and forest products output in the northeastern United States and second in the nation in paper production (Innovative Natural Resource Solutions 2005). Moreover, harvests are stable at or near long-term sustainable levels, while softwood and hardwood lumber production have increased 250 percent and 400 percent, respectively, since 1975 (Innovative Natural Resource Solutions 2005).

The state's recreation and tourism sector is comprised of businesses engaged in a broad array of recreational activities including hunting, fishing, and recreational camps; guiding and outfitting services; support industries for skiing and snowmobiling interests;

From massive land sales up north, to rising development pressures in the south and along the coast, the future of Maine's forests as a working landscape open to recreationists and yielding a host of environmental services is increasingly uncertain.

and various outdoor-oriented educational programs. Also dependent upon the state's forests and other natural amenities are a host of dining, lodging, and transportation providers that serve the needs of the estimated 44 million people who take day and overnight trips in Maine each year (Longwoods International 2005).

If from a historic perspective northern Maine's forests have turned an ecological corner, the fate of the region's communities is less certain.

PRESSURES FOR CHANGE IN THE MAINE WOODS

The economic health of Maine's forest-based economy, as well as the region's rural communities, is largely dependent upon access to the region's vast forestlands. This access is increasingly uncertain. Indeed, for much of the last century, huge expanses of Maine's North Woods were controlled by a handful of large, vertically integrated forest products companies as a means to ensure timber for their mills. These lands were typically open to public use, and over the years thousands of private camps were built on leased lands along the region's remote lakes and waterways.

This long-standing pattern began to unravel in the 1980s and 1990s due to changing tax and investment laws, globalization, intense competition within the forest products sector, and increased demands for residential and resort development (Liliehholm 1990). By 2000, the magnitude and pace of change had caught many by surprise. Indeed, in 1994, forest industry firms owned about 60 percent of the state's large tracts of timberland, while financial investors owned just three percent. By 2005, financial investors controlled approximately one-third of these lands, while industry control fell to just 15 percent (Hagan et al. 2005).

These new owners were a diverse mixture of financial and environmental interests, and a host of

new terms entered the state's lexicon, from REITs (real estate investment trusts), TIMOs (timber investment management organizations), and MIMOs (mill investment and management organizations), to conservation-minded NGOs (non-governmental organizations) such as The Nature Conservancy, Maine Audubon, the Forest Society of Maine, and others.

Meanwhile, as northern Maine's forests experienced a frenzy of land sales, changing ownership, and parcel fragmentation, southern parts of the state saw the conversion of farms and forests to suburban and commercial development at unprecedented rates. According to a 2006 report by the Brookings Institution entitled *Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places*, between 1980 and 2000 Maine saw development alter the rural character of more than 850,000 acres, an area the size of Rhode Island. Nearly three-quarters of these lands were converted during the 1990s. Only the state of Virginia exceeded this statewide percentage loss in developable rural land. Moreover, this loss was the result of just 65,000 new residential dwellings making Maine's conversion rate of 10 acres per new housing unit the third highest behind Vermont and West Virginia (Brookings Institution 2006). Maine's newfound growth is largely driven by in-migration from nearby states. In fact, Maine's post-2000 in-migration rate of 6.3 residents per 1,000 ranks fifth behind Nevada, Arizona, Florida, and Idaho. And while Maine's population virtually stopped growing in the 1990s, since 2000 its annualized growth rate has grown to 0.72 percent, a rate that exceeds all New England states except New Hampshire (Brookings Institution 2006).

A growing number of studies suggest that these trends will continue. For example, a recent USDA Forest Service report entitled *Forests on the Edge* (Stein et al. 2005) placed three Maine watersheds, the Lower Penobscot, Lower Androscoggin, and the Lower Kennebec, within the top 15 of more than 1,000 watersheds nationwide based on the number of acres of private forestland that are expected to experience increased residential housing densities by 2030. In fact, Maine had by far the greatest forest area at risk to development within these top 15 watersheds, with the Lower Penobscot ranked first in the nation.

While development pressures are not new or unique to Maine, the potential for future growth is particularly strong given the state's predominance of private land, relatively low land prices, abundant scenic and cultural amenities, and proximity to major population and transportation centers. Even in remote areas, forestland values have risen to prices above that which can be solely attributed to long-term forest management (LeVert et al. this issue). And much of the lands leaving forest industry control are located mid-state near population centers and transport infrastructure (see maps, Hagan et al. 2005: 11), in short, lands rich with development potential.

Over time, these development pressures have the potential to adversely affect the state's forest-based economy (Alig et al. 2004) through

- increased parcelization of ownership;
- increased residential development and the fragmentation of forests, farms, and other open spaces;
- heightened concerns and regulation over timber harvests and recreational use;
- reductions in the land area available for timber harvests and recreation;
- decreased landowner investment in forest management;
- increased taxes as municipal budgets and demands for services rise;
- increased traffic and congestion that may affect timber hauling costs.

Rapid and haphazard development also has the potential to threaten Maine's unique quality of place—the combination of economic, environmental, and socio-cultural assets that are increasingly important to the state's economy and constitute the “Maine brand” that attracts both visitors and new residents to the state (Governor's Council on Maine's Quality of Place 2007). Protecting Maine's brand and its ability to attract new residents is especially important given the state's aging demographics and the continued out-migration of younger residents.

A HISTORIC PERSPECTIVE OF MAINE'S NORTH WOODS

In assessing the changes facing the forests and people of northern Maine, it is useful to first step back and consider the region from a historic perspective. Such a view would reveal that these landscapes, along with the communities that they support, are more resilient and dynamic than many suspect. One need only compare the region's current natural beauty with its rapacious past. Indeed, Bangor's rise as the “Lumber Capital of the World” in the mid-1800s was fueled by some of the most aggressive logging in history—at a time of little if any environmental restraint (Wilson 2005). The subsequent rise of the region's pulp and paper industry fouled both air and water in ways unimaginable today, as did the massive clearing of forests for agriculture a century earlier in more southern reaches of the state. This historic perspective tells us that what we see today is simply a snapshot in time of an ever-changing natural and cultural landscape.

Indeed, while some question the sustainability of today's commercial forest practices, Maine's forests have fallen to the axe perhaps a dozen times—and never with the level of regulatory oversight, protection, and professional forest management we see today. In fact, Maine's forest area has increased more than 60 percent since the late 1800s, while timber volumes have nearly doubled since the 1950s (McWilliams et al. 2005). With millions of acres under various forms of protected status and more than seven million acres of working forest under independent third-party environmental certification—the highest amount and percentage of any state (Maine Forest Service 2005)—in some respects the region's ecological future has never been more secure.

If from a historic perspective northern Maine's forests have turned an ecological corner, the fate of the region's communities is less certain. For the timber economy, growing competition has led to job losses despite stable harvest and production levels as firms invest in more efficient, less labor-intensive technologies. To some extent, these losses have been offset by growth in the tourism sector, although declines in visitation at popular Maine destinations such as the

Allagash Waterway (down 70 percent between 1999 and 2005), Acadia National Park (down 23 percent between 1996 and 2006), and Maine's state parks raise questions about tourism's ability to fill the void left by departing forest sector jobs.

In many respects, the tourism sector we see today is just a faint outline of its past, like the stone foundations that once supported the grand hotels and lodges—vestiges of an elegant yet rustic world hardly imaginable today. Consider the region around Moosehead Lake at the turn of the 20th century. Then, four railway lines brought visitors to the popular resort destination. From there, a fleet of as many as four steamships ferried tourists, and their automobiles in later years, to hotels such as the Kineo House, whose dining room in the early 1900s could seat 500 guests—roughly one-third of Greenville's population today (Parker 2004). Locals made a living working for the hotels and restaurants and as fishing and hunting guides for visiting “sports” and “rusticators” from “away.” Nearby farms and orchards—forests today—provided fresh meat and produce. And it is not just the Moosehead region that has reverted back to forest. Hikers across Maine are often surprised to find reminders of the past scattered across the forests: stone foundations, rock walls, remnant orchards with wild apples, and, in the case of the Allagash, a pair of massive steam locomotives idled for nearly a century amidst millions of acres of dense forest.

Today, as the timber and tourism economies struggle, so too do the people and communities of northern Maine. The grand homes and once-vibrant downtowns of many rural communities bear witness to an era when hard work and wealth from the land built communities that thrived, when local goods served local markets and provided decent jobs in return, before Wall Street eclipsed Main Street by the ever-increasing mobility of capital. This past has been replaced by the steady pace of globalization, urbanization, and mechanization, and by a half-century of decline in the price of most natural resource commodities (Morisset 1998), which can increasingly be supplied from half-way around the world at lower cost due to cheap energy, low wages, and lax or nonexistent environmental protections.

FORGING A REGIONAL VISION FOR MAINE'S NORTH WOODS

The challenges facing the Maine Woods have spurred a growing call for action. Such calls are not new. From Percival Baxter's first acquisition in 1930 of what would later become Baxter State Park to Roxanne Quimby's controversial purchases today, from the Northern Forest Lands Council in the early 1990s to today's proliferation of market-based, collaborative partnerships (Ginn 2005), this legacy of public and private protection leaves little doubt of the region's enduring value. But one does sense an added urgency to today's concerns, an urgency deserving of a broader, more coordinated approach to protecting the region's forests and communities.

Adopting a Regional View

Efforts to protect the working landscapes and rural communities of northern Maine could benefit from a broader, more comprehensive view of the region and its challenges. Indeed, forest fragmentation, parcelization, sprawl, and rural economic development all transcend municipal and county jurisdictions, and suggest the need for a regional or landscape-level approach (Foster 2001). This approach should identify and strengthen the region's ecological, economic, social, cultural, and political assets, and place these within the larger context of Maine, New England, the Maritime Provinces, and beyond.

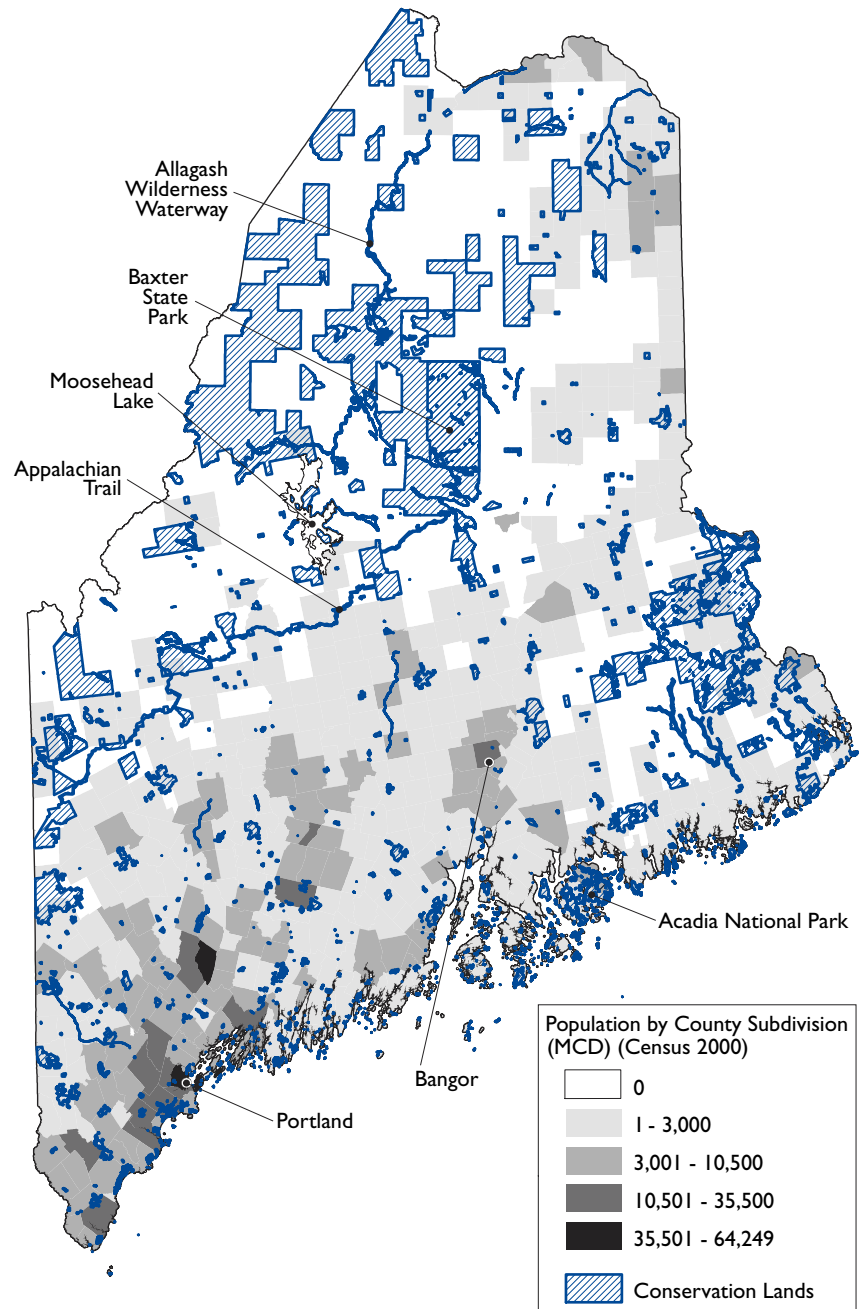
When it comes to environmental protection, the conservation community is well aware of the need for landscape-level approaches (R. Baldwin et al. this issue). In New England, these efforts have evolved under the dual goal of protecting both human and natural systems, a relatively new approach that stems in part from the region's abundant private lands and long history of forest use.³ Indeed, at scales unequaled across the nation, groups such as The Nature Conservancy, the New England Forestry Foundation, the Forest Society of Maine, the Open Space Institute, Maine Audubon, the Trust for Public Land, and others have used their considerable resources and expertise to work with landowners, businesses, communities, and all levels of government to assemble an impressive portfolio of protected areas across Maine and the other

FIGURE 1: **Maine's Protected Lands**

New England states (Clark and Howell this issue). These partnerships have been furthered by more than 100 local land trusts and thousands of conservation-minded land-owners and residents. Many of these efforts have been leveraged through the state's popular Land for Maine's Future program, which has raised \$114 million through a series of bond initiatives and protected more than 445,000 acres of critical lands since the program's inception in 1987.

Collectively, these public and private efforts have protected more than three million acres in the four-state Northern Forest Region (Maine, New Hampshire, Vermont, and New York) through outright purchase and conservation easements, along with additional millions of acres protected through long-term timber supply agreements and environmentally certified forest practices (Clark and Howell this issue). While these accomplishments are impressive, the resulting patchwork of protection, illustrated in Figure 1, reflects more opportunity than strategy. This in turn begs the question of whether such a complex and fragmented matrix of ownerships and objectives can lead to meaningful, long-term, landscape-level protection: in short, whether the whole is even equal to the sum of its parts (Fairfax et al. 2005).⁴

The rapidly evolving science of landscape-level conservation has much to offer northern Maine. Indeed, a regional approach using core protected areas such as Baxter State Park, buffers of working forestlands, corridors, and a variety of easements, could offer lasting protection (R. Baldwin et al. this issue; E. Baldwin et al. this issue; Clark and Howell this issue). This approach would give special recognition to public access and working forestlands vital to the region's communities and economy. It would also target wetlands, ponds, lakes, and waterways—areas increasingly at risk from development that are critical to the region's



The map depicts protected public and private lands, which are primarily held in fee simple ownership and conservation easements, along with a small amount of leased land.

Sources: Land for Maine's Future and The Nature Conservancy

quality-of-place, recreation and tourism sector, and the provision of a wide range of ecosystem services.

A regional vision also would nurture the recreation and tourism sector by leveraging the state's already strong "brand recognition." Indeed, 150 years ago one of history's most celebrated ecotourists, Henry David Thoreau, made his way to Maine's North Woods on three occasions. Even today, much of what inspired Thoreau endures in what remains the largest "wilderness" east of the Mississippi River. From Mount Katahdin in Baxter State Park to Moosehead Lake, the Allagash Waterway and the Appalachian Trail, the region's already-protected amenities provide a strong foundation for a world-class tourist destination (Vail this issue). Efforts to strengthen the sector should embrace the region's rich cultural and historic heritage as well, linking the North Woods with Maine's coastal tourist markets in an effort to attract more visitors for longer stays through scenic travel routes and destination lodges in gateway communities such as Bangor, Greenville, Millinocket, and Jackman.

A regional vision for the North Woods should adopt as its foundation the sustainability of ecosystems and ecosystem processes, working forests, recreational access and tourism, and rural communities.

Already, a host of conservation-driven regional studies are underway. These range from large-scale, multi-state and transnational efforts spanning the broader Northern Appalachians region (e.g., The Nature Conservancy's Conservation Design, a Wildlands Network Design by the Wildlands Project, a human footprint developed by the Wildlife Conservation Society, and several human footprint futures scenarios by Two Countries, One Forest), to more localized efforts such as The Trust for Public Land's "Greenprinting" initiative for the greater Bangor area and The Nature Conservancy's Moosehead

Conservation Framework. These efforts, which clearly represent the early pieces of what could emerge as a regional strategy, would benefit from a broader social and economic perspective (see, for example, Katz 2000; Foster 2001; Porter and Wallis 2002), including the adoption of an "alternative futures" planning framework (see Hunter et al. 2003; Steinitz et al. 2003; Baker et al. 2004; Lilieholm et al. 2005). Indeed, what is largely missing from these efforts is the economic development component of a regional strategy—the mix of forestry, residential/resort development and tourism needed to sustain the cultural and natural landscape of the region.

Embracing Sustainability

A regional vision for the North Woods should adopt as its foundation the sustainability of ecosystems and ecosystem processes, working forests, recreational access and tourism, and rural communities. This vision should also recognize that the prospect of peak global oil production, possibly to occur within a decade (Simmons 2005), will challenge our notions of sustainability as never before. Indeed, the effects of declining oil production and rising extraction costs will be amplified by increased global demand as the world's population grows from six to nine billion by 2050. These thresholds have the potential to radically alter the global economy and virtually every aspect of our lives. It will also test our ability to sustain forests, farms, and communities as we transition toward a renewable resource-based "bio-economy" (OECD 2006; Smil 2006).

In truth, no one knows what the emerging bio-economy will look like. But if it resembles anything like the last bio-economy, the 1800s, we will rely on our farms and forests more than ever to supply a greater array of goods and services to a much larger population. In this respect Maine is well positioned, for it was the region's abundant forests, fisheries, and waterways for hydropower and navigation that drew settlers here in the first place. In an energy-limited future, these assets might once more be valued as distance to market reasserts itself as a cost factor in commerce (Kunstler 2005).

Transitioning toward a more sustainable future means favoring sustainably produced goods with limited environmental impact and low energy demands.

Here, wood is the material of choice: recyclable, renewable, biodegradable, carbon neutral, low-energy input, and versatile. In addition, during wood's decades-long solar-powered production, forests provide habitat, sequester carbon, purify the air and water, protect soils, recycle nutrients, and reduce flood risk. In a sustainable world economy, wood will increasingly replace energy-intensive and environmentally costly nonrenewable substitutes such as metals, plastics, concrete, and glass.

Already, a host of emerging technologies promise to create "biorefineries" producing a range of new forest-based bioproducts such as plastics, resins, and polymers, as well as liquid transportation fuels like cellulosic ethanol.⁵ Also encouraging is the growing bioenergy market. Indeed, Maine's forests already supply 25 percent of the state's overall energy needs and more than 20 percent of its electricity (NEFA 2007). These trends have the potential to displace imported fossil fuels and reduce greenhouse-gas emissions while creating local jobs and stimulating rural economies. In addition, emerging markets for ecosystem services have the potential to increase the economic returns to forests by recognizing their role in sequestering carbon and providing a host of other unpriced yet socially valued goods and services (Pagiola et al. 2002).

A regional vision for the North Woods should also embrace sustainable tourism. Vail (this issue) describes some of the challenges to creating a world-class tourism sector in northern Maine. Efforts to overcome these obstacles should showcase "eco-resorts," LEED certified "green" design and construction, and "smart growth" principles, including the siting of new development within existing gateway communities where services and infrastructure are already in place. Such an approach would reinforce the role that rural communities play in sustaining these landscapes. Indeed, by concentrating new development within existing downtowns, industrial sites, and neighborhoods, rural communities would benefit by attracting much-needed jobs, residents, and investment while avoiding costly duplication of services and new infrastructure (Burchell et al. 2005). These logical growth centers would further serve as natural conduits to channel development away from working forests, recreational lands, and ecologically sensitive areas.

Reconsidering a Federal Role in Protection

Reaching a common vision for Maine's North Woods would require a regional effort that transcends both jurisdictional and public/private boundaries. Such an effort should not stop at the state's borders, but instead include a federal partnership to leverage available leadership, expertise, and resources. Unfortunately, a strained history of state-federal cooperation with respect to land use has, in the minds of many, largely removed this option from consideration (Judd and Beach 2003). Contributing to this reluctance is lingering controversy from efforts to promote a Maine Woods National Park, a vision of federal involvement perhaps least suited to the region given its near absence of federal land and overwhelming private ownership. Indeed, visions of a massive federal land acquisition program "locking up" millions of acres of working forests have served to galvanize opposition to any federal role (E. Baldwin et al. this issue). This opposition, widely held across the state, should be reconsidered.

First, as demonstrated by E. Baldwin et al. (this issue), key participants and decision-makers in Maine appear largely unaware of the wide range of federal options that could offer forest protection while leaving unchanged and even strengthening existing land use and ownership patterns. These options range from National Heritage Area designation to a more comprehensive approach such as the National Reserve model used to protect New Jersey's Pinelands from development in the 1970s. There, a highly successful regional planning effort was used to safeguard nearly one million acres of forests, farms, and groundwater from haphazard development by channeling new growth into existing communities through a market-based program of transferable development rights (Lilieholt and Romm 1992). (See sidebar, p. 20.) The parallels between the challenges in the North Woods and those facing the Pinelands 30 years ago are striking, and the subsequent success of the Pinelands model warrants careful examination.

In fact (and unbeknownst to many), federal dollars are already at work in the North Woods. Clark and Howell (this issue) note the critical role that federal funds through the USDA Forest Legacy Program have made in the past in acquiring key parcels in partnership

New Jersey's Pinelands National Reserve

The Pinelands of New Jersey cover over a million acres of scrub oak, pitch pine, and Atlantic white-cedar swamps amid the nation's most densely populated state. It is home to a wide range of unique ecological zones, with many rare and unusual plant and animal species reaching their northern- or southern-most geographic limits within the region. Located in the heart of the New York-Philadelphia-Atlantic City region, the Pinelands faced a growing list of development threats, from residential and commercial construction to retirement villages and, at one point, an ambitious proposal for a 43,000-acre international airport.

As development pressures rose, so too did efforts to protect the region's unique culture and ecology. Of particular concern was safeguarding the 17-trillion-gallon aquifer underlying the Pinelands' sandy soils—one of the largest and least-spoiled aquifers in the Northeast. Protection efforts culminated in 1978 with the creation of the 1.1-million-acre Pinelands National Reserve, the first of its kind. Although national in status, just 10 percent of its lands are federally owned, and management is largely determined by state and local governments. As a protection model, the Pinelands National Reserve sharply contrasts with more common national parks and monuments, where federal ownership prevails. In fact, 55 percent of lands within the reserve are privately owned, and federal ownership is limited to just 110,000 acres, most of which was held prior to the reserve's creation in several military installations and national wildlife refuges.

The reserve is roughly broken into two contiguous regions: a 288,300-acre preservation area that includes lands having scientific value of national importance, and a 566,000-acre protection area. While most land in the preservation area was already under protection as a state forest, the protection area includes both public and private lands. Land uses in this second zone range from forestry and agriculture to peripheral growth centers designed to concentrate development that otherwise would have penetrated and spread across the entire region. A comprehensive management plan (CMP) guides development away from environmentally sensitive areas and into designated growth centers.

The reserve is managed by a 15-member Pinelands Commission, with representation equally split between the state and affected counties (seven members each) along with a single federal appointee. Since the viability of the reserve depends on balancing growth and protection, the Pinelands model contains a number of novel features to ensure flexibility in land use, equity among affected interests, and sustained effectiveness in preserving the region's unique features. For example, landowners in the protection area receive transferable development credits to compensate for land use restrictions. These can be sold to developers in growth centers, allowing them to build at higher densities. Local governments receive payments-in-lieu-of-taxes to compensate for lost tax opportunities, and funding for the reserve comes primarily from state and federal sources.

After 30 years, many agree that the Pinelands National Reserve has successfully balanced growth pressures in the region, protecting the Pinelands and traditional land uses such as forestry and agriculture without placing excessive burdens on any particular groups. County and local planning boards have complied with the CMP to a degree that surpasses other regional planning efforts in the United States, and the plan has successfully channeled new development away from environmentally sensitive areas.

with the state and NGOs. The USDA Forest Service's recently announced Open Space Conservation Strategy, designed to work in partnership with landowners and communities to conserve open spaces and working landscapes, promises to expand opportunities (USDA Forest Service 2007). The resources and expertise provided by an expanded state/federal partnership would greatly enhance the region's national and even international visibility and offer obvious boosts to the recreation and tourism sector. Such a partnership, thoughtfully directed, could ensure continued access to working forestlands while increasing the visibility of the region's natural amenities, drawing new residents and investment just as other federally recognized, amenity-rich landscapes have experienced across the United States.⁶

A Future Built on Shared Prosperity

Whatever vision emerges for Maine's North Woods, it should include a firm commitment to shared economic prosperity for the region's communities and residents. Indeed, the dichotomy of "Two Maines," one vibrant and prosperous, the other struggling, is increasingly unsustainable as chronic poverty stresses the region's families, communities, social capital, and institutions. And more than ever, these problems are being compounded by rising energy costs, high state and local taxes, regressive federal payroll taxes, and the out-migration of younger residents in search of a better future (Acheson 2006).

A regional vision should seek rural renewal through economic diversification strategies that take advantage of the region's social and natural assets. This is not a debate over "timber vs recreation." Indeed, both have served the region for over a century. In the forest products sector, new technologies such as advanced engineered wood composites and biorefineries have the potential to extract more value and jobs from each unit of wood processed. To realize this potential, the state should continue its already substantial investment in research and development within the forest products cluster.

A similar commitment is needed to expand local opportunities in the tourism sector. Here, efforts should seek to enhance the region's "green infrastructure" such as trails and visitors centers (Vail this issue), including those found within Maine's struggling state park system, in an effort to extend both visitor stays and the tourism season. In addition, coordinated efforts are needed to expand the range of tourist destinations to better match the needs of a diverse and growing range of potential visitors. For example, the region currently offers a host of camping opportunities, while largely missing out on the lucrative and fast-growing demand for amenity-rich destination resorts (Mongan et al. 2007). As resort professionals discussed with Czerwonka (this issue: p.123) in a recent roundtable, resort goers "will continue to demand excellence with more comfort than home." They noted that many resorts are offering ever-increasing levels of services and amenities to create market draw, and that a resort that "genuinely reflected the aesthetic of the North Woods and captured what is unique about it" might prove successful (Czerwonka this issue: p.121). The demand for and compatibility of such destinations in northern Maine is witnessed by the growing popularity of the many historic lodges located throughout our national park system. Attracting a greater range of visitors to the region would not only generate additional jobs and income, but would yield an array of social benefits by fostering improved public health and environmental literacy (Louv 2006). Realizing these benefits would require additional investment in education and training in order to foster business development and improve service levels within the industry.

Realizing shared prosperity for the North Woods requires more than developing the timber and tourism

sectors. By protecting northern Maine's landscapes and communities, the region would attract new residents and businesses. Already, Maine has 16 percent of its housing stock in second homes, the highest percentage in the nation (Bell this issue). Although an abundance of seasonal housing can challenge local communities, such high levels of investment hold testament to the state's desirability and generate much-needed tax base while demanding relatively little in the way of public services. To better attract new residents and businesses, the region's quality-of-place assets should be leveraged through improved infrastructure, incentives such as the Pine Tree Development Zone program, and the creation of building codes and tax incentives that favor the renovation of the region's historic structures.

LURC, Plum Creek, and the Vision

One cannot consider the future of Maine's North Woods without addressing the Land Use Regulation Commission (LURC) and Plum Creek's Concept Plan (2007) for more than 400,000 acres in the Moosehead Lake region. Indeed, as Maine's largest-ever development proposal, the plan has generated intense debate across the state and beyond. This debate, long-overdue, has served an invaluable role in focusing public attention on landscape fragmentation, sprawling development, and the plight of the region's rural communities. The debate has also revealed important schisms within the state. The first divide largely reflects the two Maines described above—rural residents eager for economic development and a largely suburban contingent concerned about forest loss and sprawling development. The second divide lies within the conservation community. There, some view Plum Creek's proposal as unacceptably large and as setting a dangerous precedent. Others feel that like it or not, change is coming to the North Woods. This latter group, based on past experience, has weighed the threats and opportunities embodied in the proposal, and has cautiously supported Plum Creek's plan (Forest Society of Maine 2007).

LURC, as the region's primary planning and zoning authority, is currently engaged in its own visioning exercise as it works to develop its 2008 Comprehensive Land Use Plan (Bley this issue). How the agency ultimately weighs in on these issues is anyone's guess, but based on the vision described

above, Plum Creek's plan may have much to offer. Foremost is the plan's conservation of roughly 95 percent of the area, or 431,000 acres (Forest Society of Maine 2007). Indeed, if Plum Creek's plan is to be seen as a precedent, then its 95 percent conservation benchmark represents a significant threshold for future development proposals. Also important is the plan's adoption of smart-growth principles that concentrate development in and around existing communities, thereby limiting environmental impacts while serving local desires for economic development. But in a broader sense, the concept plan represents at its heart Plum Creek's willingness to undertake a massive investment in the North Woods, a necessary first step in creating a viable tourism industry for the region.

Realizing these benefits would require that development be thoughtfully designed and carefully implemented. Done intelligently, the proposal could create a flagship destination to anchor the region's tourist economy. In meeting this challenge, one could look to the past to find guidance in the large, historic inns that have graced many western national parks for over a century: Yellowstone's Old Faithful Inn, Glacier's Lake McDonald Lodge, the Grand Canyon's El Tovar Hotel, and Yosemite's Ahwahnee Hotel, to name just a few.

REALIZING THE VISION

In 1871, 14 years after Thoreau last walked the Maine Woods, a young Theodore Roosevelt began what would become his own series of trips to the region. As an impressionable teenager sent by his father to be "toughened-up," Roosevelt thrived under adversity, and many consider his adventures in Maine as an important catalyst in the development of his conservation ethic and legacy. Indeed, Roosevelt's visits roughly coincided with Maine's peak lumbering years, and the perceptive future president must have understood the social, economic, and environmental consequences of the large-scale, uncontrolled logging taking place at the time.

Roosevelt left Maine with a vision and drive that would guide him the rest of his life, and his radical embracing of scientific forest management, sustainable harvesting, and wildlife conservation would set new standards for his time. Indeed, as president from 1901 to 1909, Roosevelt's conservation vision reshaped

the natural landscape of the United States more than any other person before or since, creating the first wildlife reserves, the first national forests, and the first national monuments, many of which would later become national parks. Roosevelt's vision, forged in Maine's North Woods, would lead to the permanent protection and management of 194 million acres of forests and rangelands.

Writing in 1918, just months before his death, Roosevelt wrote of his "personal debt to Maine," expressing gratitude to the friends and experiences that had served him so well in life. Were Roosevelt alive today, he would no doubt marvel at the recovery of the North Woods. He would also have something to say about today's threats to the region: forest fragmentation and sprawling development. Indeed, the challenge today is how to achieve lasting protection for a landscape under private ownership, protection that allows for the sustained production of timber and environmental services while accommodating recreational access for current and future generations, and protection that balances public and private rights and responsibilities in land (Anderson this issue). Reaching such a vision would require a level of cooperation and commitment rarely seen today. Yet in seeking such a goal, returning Roosevelt's foresight and vision to its original birthplace, Maine's North Woods, seems particularly germane.

As noted by E. Baldwin et al. (this issue), there is widespread support for a comprehensive vision to sustain the North Woods' social, cultural, and natural assets. Reaching such a vision raises a host of difficult yet important questions: *"What is it that we value about these landscapes?"* And, *"What are we willing to spend to protect them?"* And perhaps most important, *"What is our obligation as a society to the region's communities?"*—to the people who plow the roads, pump the gas, maintain the power lines, cut the trees, run the mills, and teach the kids. How we respond to the challenges facing Maine's North Woods will not only decide the region's fate, it will also reveal much about ourselves as a people, and in doing so establish our own legacy for the future. 🌲

ENDNOTES

1. Today, major forestland owners in Maine include families and individuals (32 percent), followed by the forest products industry (31 percent) and "other corporate" (31 percent). The state of Maine owns just four percent of forestlands, followed by federal (one percent) and local (one percent) ownerships (McWilliams et al. 2005).
2. Employment within the forest products sector has declined in step with state and national manufacturing trends, falling from 27,400 jobs in 1990 to 18,600 in 2005, a decline of 32 percent, with the largest decreases in the pulp and paper sector. These job losses disproportionately affect rural communities due to their relatively high pay, benefits, and year-round employment. For example, the average 2000–2003 wage for Maine paper-mill and sawmill employees was more than \$47,000 (Innovative Natural Resource Solutions 2005).
3. There are roughly 117 land trusts operating in Maine, including land- and easement-holding NGOs such as The Nature Conservancy. Of the 85 land trusts with mission statements listed with the Maine Land Trust Network, 85 percent cite ecological and social reasons for protecting lands. Forty percent cite economic goals, including the protection of working forests and agricultural lands.
4. The rapid growth of conservation easements in the United States has in many respects outpaced the full understanding of their legal implications. Indeed, while the vast majority of conservation easements are granted in perpetuity, their "permanency" is coming under increased scrutiny. McLaughlin (2005, 2006) describes the intricacies of holding, amending, and terminating conservation easements. A recent case in Johnson County, Wyoming, where a perpetual conservation easement was terminated at the request of new landowners, is sure to spur increased interest.
5. The Energy Independence and Security Act (EISA) of 2007, signed into law on December 19, 2007, includes a "Renewable Fuels Mandate" that will increase the use of renewable fuels by 500 percent. Under EISA, fuel producers are required to supply 36 billion gallons of ethanol by 2022, nearly 60 percent of which is to come from cellulosic (i.e., non-corn) sources such as trees, switchgrass, and agricultural wastes.
6. A growing body of literature documents how rural gateway communities in amenity-rich U.S. counties have economically outperformed communities in amenity-poor counties (Haefele et al. 2007). The existence of national forests, national parks, and other public lands

contributes to this trend by raising a region's visibility while providing both long-term environmental protection and recreational opportunities (Stein et al. 2007).

REFERENCES

- Acheson, Ann W. 2006. Poverty in Maine 2006. Margaret Chase Smith Policy Center, University of Maine, Orono.
- Alig, Ralph J., Jeffrey D. Kline and Mark Lichtenstein. 2004. "Urbanization on the U.S. Landscape: Looking Ahead in the 21st Century." *Landscape and Urban Planning* 69:219–234.
- Anderson, Mark W. 2007. "LURC and First Principles of Land Use Regulation." *Maine Policy Review* 16(2): 101–102.
- Baker, Joan P., David W. Hulse, Stanley V. Gregory, Denis White, John Van Sickle, Patricia A. Berger, David Dole and Nathan H. Schumaker. 2004. "Alternative Futures for the Willamette River Basin, Oregon." *Ecological Applications* 14(2): 313–324.
- Baldwin, Elizabeth D., Laura S. Kenefic and Will F. LaPage. 2007. "Alternative Large-Scale Conservation Visions for Northern Maine: Interviews with Decision Leaders in Maine." *Maine Policy Review* 16(2): 78–91.
- Baldwin, Robert F., Stephen C. Trombulak, Karen Beazley, Conrad Reining, Gillian Woolmer, John R. Nordgren and Mark Anderson. 2007. "The Importance of Maine for Ecoregional Conservation Planning." *Maine Policy Review* 16(2): 66–77.
- Bell, Kathleen P. 2007. "Houses in the Woods: Lessons from the Plum Creek Concept Plan." *Maine Policy Review* 16(2): 44–55.



Robert J. Lilieholm is E.L. Giddings associate professor of forest policy in the University of Maine School of Forest Resources, where he has been since 2006. He spent 18 years at Utah State University in the College of Natural Resources, where he was named "Professor of the Year" in 1994. He has authored numerous publications and reports through funding provided by the National Science Foundation, Ford Foundation, U.S. Agency for International Development, U.S. Environmental Protection Agency, and other funding sources. Lilieholm has worked for Plum Creek Timber Company as an expert witness on forest management issues in the western U.S.

- Bley, Jerry. 2007. "LURC's Challenge: Managing Growth in Maine's Unorganized Territories." *Maine Policy Review* 16(2): 92–100.
- Brookings Institution. 2006. *Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places*. Brookings Institution, Washington, DC.
- Burchell, Robert W., Anthony Downs, Barbara McCann and Sahan Mukherji. 2005. *Sprawl Costs: Economic Impacts of Unchecked Development*. Island Press, Washington, DC.
- Clark, Sara A. and Peter Howell. 2007. "From Diamond International to Plum Creek: The Era of Large Landscape Conservation in the Northern Forest." *Maine Policy Review* 16(2): 56–65.
- Czerwonka, Ann. 2007. "Ecotourism Potential in Maine's North Woods: A Roundtable Commentary." *Maine Policy Review* 16(2): 121–125.
- Fairfax, Sally K., Lauren Gwin, Mary Ann King, Leigh Raymond and Laura A. Watt. 2005. *Buying Nature: The Limits of Land Acquisition as a Conservation Strategy, 1780–2004*. The MIT Press, Cambridge, MA.
- Fausold, Charles F. and Robert J. Lilieholm. 1999. "The Economic Value of Open Space: A Review and Synthesis." *Environmental Management* 23(3): 307–320.
- Forest Society of Maine. 2007. "Significant Changes to Plum Creek Proposal Offer Extraordinary Conservation Opportunity." *Forest View* 8(2): 1–2.
- Foster, Kathryn A. 2001. *Regionalism on Purpose*. Policy Focus Report. Lincoln Institute of Land Policy, Cambridge, MA.
- Governor's Council on Maine's Quality of Place. 2007. *People, Place, and Prosperity: 1st Report of the Governor's Council on Maine's Quality of Place*. Maine State Planning Office, Augusta.
- Ginn, William J. 2005. *Investing in Nature: Case Studies of Land Conservation in Collaboration with Business*. Island Press, Washington, DC.
- Haefele, Michelle, Pete Morton and Nada Culver. 2007. *Natural Dividends: Wildland Protection and the Changing Economy of the Rocky Mountain West*. The Wilderness Society.
- Hagan, John. M, Lloyd C. Irland and Andrew A. Whitman. 2005. *Changing Timberland Ownership in the Northern Forest and Implications for Biodiversity*. Manomet Center for Conservation Sciences, Report #MCCS–FCP–2005–1, Brunswick, ME.
- Hunter, Lori M., Manuel J. Gonzalez, Matt Stevenson, Kimberly S. Karish, Richard E. Toth, Thomas C. Edwards Jr., Robert J. Lilieholm and Mary Cablk. 2003. "Population and Land Use Change in the California Mojave: Natural Habitat Implications of Alternative Futures." *Population Research and Policy Review* 22:373–397.
- Innovative Natural Resource Solutions. 2005. *Maine Future Forest Economy Project: Current Conditions and Factors Influencing the Future of Maine's Forest Products Industry*. Prepared for Maine Department of Conservation, Maine Forest Service and Maine Technology Institute. Innovative Natural Resource Solutions LLC, Portland, ME.
- Irland, Lloyd C. 1999. *The Northeast's Changing Forest*. Harvard University Press, Cambridge, MA.
- Judd, Richard W. and Christopher S. Beach. 2003. *Natural States: The Environmental Imagination in Maine, Oregon, and the Nation*. Resources for the Future, Washington, DC.
- Katz, Bruce. 2000. *Reflections on Regionalism*. Brookings Institution Press, Washington, DC.
- Kunstler, James Howard. 2005. *The Long Emergency: Surviving the Converging Catastrophes of the Twenty–First Century*. Atlantic Monthly Press, New York.
- LeVert, Mike, Charles Colgan and Charles Lawton. 2007. "Are the Economics of a Sustainable Maine Forest Sustainable?" *Maine Policy Review* 16(2): 26–36.
- Lilieholm, Robert J. 1990. "Alternatives in Regional Land Use Planning." *Journal of Forestry* 88(4): 10–11.
- Lilieholm, Robert J. and J.M. Romm. 1992. "The Pinelands National Reserve: An Intergovernmental Approach to Nature Preservation." *Environmental Management* 16(3): 335–343.
- Lilieholm, Robert J., Richard E. Toth and Thomas C. Edwards, Jr. 2005. "Alternative Future Growth Scenarios for Utah's Wasatch Front: Identifying Future Conflicts between Development and the Protection of Environmental Quality and Public Health." *Ecology and the Environment* 84:1079–1088.
- Longwoods International. 2005. *Travel and Tourism in Maine: The 2004 Visitor Study Management Report*. Maine Office of Tourism, July 14th presentation.
- Louv, Richard. 2006. *Last Child in the Woods: Saving our Children from Nature–Deficit Disorder*. Algonquin Books, Chapel Hill, NC.

- Maine Forest Service. 2005. 2005 Biennial Report on the State of the Forest and Progress Report on Forest Sustainability Standards. Maine Forest Service, Augusta.
- McLaughlin, Nancy A. 2005. "Rethinking the Perpetual Nature of Conservation Easements." *Harvard Environmental Law Review* 29:421–521.
- McLaughlin, Nancy A. 2006. "Amending Perpetual Conservation Easements: A Case Study of the Myrtle Grove Controversy." *University of Richmond Law Review* 40:1031–1097.
- McWilliams, William H., Brett J. Butler, Laurence E. Caldwell, Douglas M. Griffith, Michael L. Hoppus, Kenneth M. Laustsen, Andrew J. Lister, Tonya W. Lister, Jacob W. Metzler, Randall S. Morin, Steven A. Sader, Lucretia B. Stewart, James R. Steinman, James A. Westfall, David A. Williams, Andrew Whitman and Christopher W. Woodall. 2005. *The Forests of Maine: 2003*. U.S. Forest Service, Northeastern Research Station, Resource Bulletin NE–164. Newton Square, PA. http://www.fs.fed.us/ne/newtown_square/publications/resource_bulletins/pdfs/2005/ne_rb164.pdf [Accessed April 28, 2008]
- Mongan, Jeff, John G. Mansour, John C. Hill Jr. and Robert C. Glazier. 2007. "Redefining Resorts." *Urban Land* (February): 69–74.
- Morisset, Jacques. 1998. "Unfair Trade? The Increasing Gap between World and Domestic Prices in Commodity Markets during the Past 25 Years." *The World Bank Economic Review* 12(3): 503–526.
- NEFA. 2007. *The Economic Importance and Wood Flows from Maine's Forests, 2007*. North East Foresters Association, Concord, NH.
- OECD. 2006. *The Bioeconomy to 2030: Designing a Policy Agenda*. International Futures Program, Organization for Economic Co-operation and Development, Paris.
- Pagiola, Stefano, Joshua Bishop and Natasha Landell-Mills. 2002. *Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development*. Earthscan, London.
- Parker, Everett L. 2004. *Kineo: Moosehead Sentinel from Native American to Hotel Grandeur*. Moosehead Communication, Greenville, ME.
- Plum Creek Timber Company. 2007. *Concept Plan for Plum Creek's Lands in the Moosehead Lake Region. Volume 2: Plan Description*. Plum Creek Timber Company, Seattle, WA.
- Porter, Douglas R. and Allan D. Wallis. 2002. *Exploring Ad Hoc Regionalism*. Policy Focus Report. Lincoln Institute of Land Policy, Cambridge, MA.
- Simmons, Matthew R. 2005. *Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy*. John Wiley & Sons, Inc., Hoboken NJ.
- Smil, Vaclav. 2006. "21st Century Energy: Some Sobering Thoughts." *OECD Observer* No. 258/59:22–23.
- Stein, Susan M., Ronald E. McRoberts, Ralph J. Alig, Mark D. Nelson, David M. Theobald, Mike Eley, Mike Dechter and Mary Carr. 2005. *Forests on the Edge: Housing Development on America's Private Forests*. U.S. Forest Service Pacific Northwest Research Station, General Technical Report, PNW-GTR 636. Portland, OR. <http://www.fs.fed.us/openspace/fote/fote-6-9-05.pdf> [Accessed April 27, 2008]
- Stein, Susan M., Ralph J. Alig, Eric M. White, Sara J. Comas, Mary Carr, Mike Eley, Kelly Elverum, Mike O'Donnell, David M. Theobald, Ken Cordell, Jonathan Haber and Theodore W. Beauvais. 2007. *National Forests on the Edge: Development Pressures on America's National Forests and Grasslands*. U.S. Forest Service Pacific Northwest Research Station, General Technical Report PNW-GTR-728. http://www.fs.fed.us/pnw/publications/pnw_gtr728/ [Accessed April 28, 2008]
- Steinitz, Carl, Michael Flaxman, David Mouat, Hector Arias, Tomas Goode, Richard Peiser, Scott Bassett, Thomas Maddock III and Allan Shearer. 2003. *Alternative Futures for Changing Landscapes: The Upper San Pedro River Basin in Arizona and Sonora*. Island Press, Washington, DC.
- USDA Forest Service. 2007. *Forest Service Open Space Conservation Strategy: Cooperating Across Boundaries to Sustain Working and Natural Landscapes*. USDA Forest Service. http://www.fs.fed.us/openspace/OS_Strategy_final_web.pdf [Accessed April 28, 2008]
- Vail, David. 2007. "Tourism Strategy for the Maine Woods: A Big Push to World Class." *Maine Policy Review* 16(2): 104–115.
- Wilson, Jeremy S. 2005. "Nineteenth Century Lumber Surveys for Bangor, Maine: Implications for Pre-European Settlement Forest Characteristics in Northern and Eastern Maine." *Journal of Forestry* 103(5): 218–223.