Woodlands of the Windham Region: A Working Landscape
An overview of the forest industry to identify challenges and growth opportunities toward a sustainable, renewable forest industry--able to be resilient and adapt to today’s physical, economic and cultural conditions.

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Renewable, resilient forests

Forests have been a renewable source of food, fuel and shelter for centuries.

Throughout Vermont, woods have been repeatedly cut, grown back and been cut again.

Forests regenerate, not as they were in the past, but as different trees that adapt to current conditions.
Highly productive forests cover 86 percent of Windham County yielding about 20,000,000 cubic feet of new growth/year. 

Forests protect soils, provide plant and wildlife habitats, filter and buffer waterways, provide recreational areas and add scenic beauty to the landscape (WRC).

They also provide jobs: 33 loggers and firewood producers, 14 foresters, one log yard, 30 primary mills, 43 secondary processors, 4 lumberyards, and 5 biomass-heating facilities (Morin).

The sale of trees for forest products provides a major economic driver that brought at least $3.8M to Windham County landowners in 2008 (Morin).
To understand current conditions, opportunities and threats to the forested landscape, it’s helpful to look at some of the people of the Windham Region whose livelihood depends on the forests.

Through profiles of our neighbors, we will illustrate some of the issues confronting the forests and people of the working landscape.
Mark Bowen
Meadowdale Farm, Putney, VT

- Mark Bowen and his family work hard throughout the year. In the warmer months, they hay fields and do construction on their own land and for others.
- They raise chickens, pigs, cows and sell eggs. In the colder months, Mark logs and cuts firewood for his family’s use and for sale.
- Mark owns a small sawmill where he mills rough-cut lumber and flooring for construction projects. From oak and locust but mostly white pine, he mills siding and tongue-and-groove boards. His family often does maple sugaring in the spring.
“Think about the forest you leave behind.”

- Mark sells cordwood locally, believing that “Cutting and burning your own wood, locally, is a lot better for the environment than using foreign oil or other energies that cost a lot to pull from the earth....

- Mark leaves the tops of the trees that he has logged in the woods to return nutrients to the soil and to help shelter saplings from browsing deer.

- He believes it is important to think about the forest you leave behind.
People, like Mark Bowen, who have learned to make their livelihoods from the land create this working landscape—the sawmill operators, small-time loggers, sugar-boilers, foresters—are independent, resourceful, and resilient.

Their efforts contribute to the local and regional economies, pass on centuries-old cultural practices, help create the potential for energy resilience, maintain forest health, increase wildlife habitat and biodiversity, and support ecosystem services that all communities, rural and urban, depend on.
Conserving the working landscape

John Whitman looks at forest management with the long view, demonstrating that “well-planned forest management and wildlife habitat go hand in hand.”

Being enrolled in the state Use Value Appraisal program, John conducts periodic harvests on his woodlot to open up for wildlife and for timber stand improvement. In return, the Whitmans receive a property tax reduction for keeping the woods a working landscape.

John and his wife, Ginny, also decided to permanently protect their beloved woods by donating a conservation easement to the Vermont Land Trust. Now future generations may enjoy the heat, timber and trail rides through the woods that John and Ginny do.
On the cutting edge

Much of the wood production in the Windham Region is the result of two strong primary sawmills in Brattleboro--Allard Lumber (producing 5-10 million board feet) and Cersosimo Lumber (the only mill above 10 million board feet in the state).

Both mills have innovated, using computers to analyze each log, quickly determining the maximum cuts for efficiency. Bark is used for mulch, the log itself is cut into lumber, remaining product is chipped for use as fuel. Allard lumber uses green woodchips from their milling process to heat the wood-kiln drying process.

Mark Rivers of Allard Lumber, says, “It’s not necessarily the easiest job, but the people who do it—love it. Sawdust is in our blood.”
All the forest professionals agreed that the work done in the region is high quality for a high quality wood product.

Educating landowners harvesting and woods management strategies is a large part of their job.

Best management practices always consider the next generation of trees, leaving the forest in better shape than current conditions.

With this goal in mind, each management technique has a right time, place and scale.
What are the threats to forest integrity?

- Overbrowsing by deer
- Development
- Invasive pests
- Changing climate
Serious threats

Many small land-based forestry businesses have closed their doors.

- High land values
- High business costs
- Overseas migration of many furniture makers
- Sawmills in Vermont declined 43 percent from 185 in 2002 down to 105 in 2008
- Increasing hardwood lumber exported as raw material, resulting in the loss of value-added manufacturing jobs for finishing wood products (Morin).
Cooperman Fife & Drum, Bellows Falls
Patrick Cooperman and sister, Patsy Ellis

Patrick Cooperman

This 2nd generation family-owned company is one of the few remaining companies to produce value-added products (manufactured from tree to market) in the Windham region.

The mill uses local veneer grade logs, a nineteenth century saw, and vintage steam building techniques and equipment from a Bellows Falls basket manufacturer purchased by their father.
Illusion of preservation

Many people today are disconnected from how lumber, paper, and other wood products are produced, are less tolerant of the unattractive byproducts of the working landscape, and more likely to prefer forests to appear untouched.

At the same time, people continue to buy wood products from far-away forests, produced under unknown conditions, sold through global markets and transported great distances with fossil fuels.

“The outsourcing of timber harvesting, processing and selling makes us forget where we get our products, and that environmental harm is being done elsewhere. It’s out of sight, out of mind” (Morin).
History: from extraction to conservation management

1730’s-1800’s: Clear cutting, potash, charcoal extraction
1803: Champlain Canal
1825: Erie Canal
1824: Sheep fever reaching 1.7 million sheep by 1840
1895-1925: Great Vermont Exodus
1927: Flood that turned the tide
1940’s: Forest management becomes a science & practice
Bill Guenther
Windham County Forester

Provides information, technical assistance, and outreach to the people of the county about managing and stewarding forestland.

1. Shares general information and education through landowner outreach
2. Certifies management plans
3. Submits forest management activity reports after each timber cut
4. Does conformance inspections to make sure management plans are living up to county and state expectations.
Silviculture Methods

- Clearcut
- Seed tree
- Shelterwood
- Group selection
- Single tree selection
“A good reputation is gold. The landowner needs to trust a logging job is being done right.”
Supporting the Working Landscape

Educate the community about local forestry

Demonstrate sustainable forest practices

Encourage smart growth

Conserve the forests

Educate forest owners about management programs and practices
Demonstrate sustainable forest practices

- Expand town forests for community use and education
- Harvest community firewood
- Manage a community sugar bush
- Demonstrate good logging practices
- Encourage local food, local forests
What is sustainable forest management?

Considering the long term health of the forest as a system

- Downed tree tops to feed the soil and to protect seedlings from deer browse.
- Snags left for bird habitat
- Openings of light in the canopy for regenerating understory
- Nurse logs
Throughout the year in Dennis’ forestry program, students learn:

- Identification of trees, insects, pests, invasive plants, soils
- Sugar bush management and sap boiling
- Stand management, Christmas trees
- Drainage installation
- Tree climbing and pruning
- Safe operation of chain saws, bulldozers, forwarders and skidders

Dennis Hamilton teaches a forestry program at the Windham Regional Career Center where teens receive a year of science equivalent credit.
Forest ownership

Windham Region

- 86% private
- 11% federal
- 1% state
- 2% municipal

Aging forest owners

- 65% are age 45-64
- 30% are over age 65
- Only 6% are under 45

“The fate of both Windham County’s forests and forest industry are in the hands of its landowners—and the myriad forces acting on those owners” (Morin).
Fragmentation of forests and increasingly smaller parcelization of land makes meaningful forest management impossible.
Encourage Smart Growth

Cluster development
Encourage development in existing growth centers
Smaller setbacks and lot sizes

Establish forest districts
Maximum setbacks to minimize long driveways
Large lots (27-acre+) allows homeowners to actively manage woodlots
Conserve the forests in the Windham Region

- Actively pursue permanent protection of large forest parcels, through acquisition or easements.
- Coordinate collaborations between municipalities, sportsmen, trail organizations, land trusts and interested citizens to evaluate and protect natural priority areas.

“One way we can protect Vermont’s working landscape is to conserve land. This land includes farms that provide us with locally produced food; forests rich with timber, firewood, wildlife habitat; and town forests and trails that invite outdoor adventures and further our connection to nature and neighbors”

(Vermon Land Trust).
Lynn Levine
Forester, educator

Lynn teaches, writes books and curriculum, leads woodland walks, conducts workshops designed to:

“Personalize the forests for landowners, by inspiring a larger vision of the forested landscape”.

Lynn has lead thousands of people through walks in the woods looking for mammal tracks in the day and searching for owls at night.
Educate forest owners about Use Value Appraisal

- Minimum of 25 acres productive forest or farmland
- Woodlot management plan
- Periodic timber harvests
- Significant tax reduction on enrolled land
- Local municipalities reimbursed by state
- 1,500 properties enrolled in Windham County
- 140,000 acres out of total of 508,000
Vermont’s Comprehensive Energy Plan sets out a pathway for Vermont to obtain 90 percent of its energy from renewable sources by 2050.

Windham Region must engage in long-term thinking about the impact of renewable energy on local forests.
Evaluating biomass

- Carbon released by biomass is already in the carbon cycle since trees are natural producers and absorbers of carbon.

- Fossil fuels bring stored geologic carbon up from deep underground, where it has been stored for millennia and releases it into the atmosphere.
Woodshed analysis

- Conducting a thorough woodshed analysis, to determine the potential sustainable supply of source wood, is essential to evaluate the use, scale and impact of potential biomass facilities.

- Such an analysis measures not only how much wood is available through sustainable harvest, but also defines sensitive areas in which harvest is not ecologically suitable.

- Public participation involving citizens, industry, landowners and conservation groups would build consensus that harvest is possible without damaging the quality of the woods, water and people they support.
Small scale wood pellet manufacturer started in 2009 in Rutland County

Now producing 16,000-20,000 tons/year low ash, high heat pellets

Chris would like to see focus on small community-scale biomass operations because they “help people feel tied to the land around them, making a link to using a resource in their own backyards and thus the need to take care of it.”

Would like to see more small-scale mills again, estimating “a small mill every hundred-mile radius in Vermont would pose little threat of competition between companies, or for forest resources between communities.”

The Vermont Wood Pellet goal is to use wood from a thirty mile radius, to “break our bond with fossil fuels,” says Chris Brooks.
Small scale power plants located near available biomass supplies near settlement are efficient because they don’t use much fossil fuel for transport.

Combined heat and power (CHP) plants generate both heat and electricity.

Two CHP facilities have been built at area schools. Middlebury College has been able to eliminate 1 million gallons of fuel oil.

Green Mountain College is able to heat campus buildings and about 20 percent of campus electricity.

Brattleboro
Biomass heat and electricity generation may ultimately provide a small percentage of Vermont’s renewable energy. However, biomass energy does provide a significant growth market for the local forest economy, and provides increased markets for low-grade wood not suitable for finished products.

Valuable forest resources, if wisely managed, can contribute to a renewable energy supply for generations to come.
An investment in our renewable future

The forest economy preserves the rural and community character that has defined the Windham Region for centuries.

Local forestry has local benefits—wildlife habitat, environmental quality and fuel and shelter for those fortunate enough to live near them.

Relying upon local sources for everyday needs is the first step to supporting our working landscape. Managing community forests wisely is an investment in our renewable future.
Many people have contributed to this project with remarkable interest and generosity. We extend sincere thanks for the expertise and insight that has been freely given toward this effort, especially to the following people:

Windham Regional Commission: Chris Campany, Susan McMahon, Jeff Nugent, Dinah Reed and John Bennett.

Thank you to Nancy Bell, the Vermont representative at the Conservation Fund for their generous donation to this project.

Special thanks to : Bill Guenther, Lynn Levine, Doug Morin, John O’Keefe, Joan Weir and John Whitman.

Personal interviews: Cliff Allard, Brian Donahue, Lincoln Fish, Ken Gagnon, Susan Hindenger, Mark Rivers, Keith Ross, Tom Wessels and David Kittridge.

Forestry focus group participants: John Adler, Steve Hardy, Robbo Holleran, Ian Martin, Pieter Van Loon and George Weir

Faces of Forestry profiles: Patrick Cooperman, Mark Bowen, Chris Brooks, Robert Clark and Dennis Hamilton.