VERMONT FOREST SECTOR SYSTEMS ANALYSIS

Exploring New Market Opportunities Across Value Chains

VERMONT
WORKING LANDS ENTERPRISE INITIATIVE
www.vermontworkinglands.com

FORESTS, PARKS & RECREATION
VERMONT
AGENCY OF NATURAL RESOURCES

YELLOW WOOD
associates, inc.

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VERMONT IS FOREST STRONG.

Indeed, forests are the original native Vermonters, having covered this land since well before Vermont existed as a state. Although many changes in the nature and extent of our forests have occurred over the course of the past 200 years, Vermont is currently 75% forested; the third most forested state in the country.

We depend on forests for their material and economic contributions—totaling $1.5 billion annually—from timber, veneer, pulpwood, firewood, chips and pellets, to maple syrup. And there are many non-monetized values and services forests provide such as water quality protection; flood control and resilience; wildlife habitat, biodiversity, and connectivity; as well as clean air and carbon sequestration. What's more, our forests provide the natural infrastructure for our increasing and diversifying outdoor recreation economy and they—along with our farms and historic human settlement patterns—provide the scenic backdrop for our world-class tourism economy. Thus, Vermont's forests are our unique competitive advantage; we cannot outsource the benefits and values they produce. Despite a historic tendency to take them for granted, we are utterly dependent on our forests.

We now understand that one of the best ways to keep forests as forests is to work with them. The premise—and promise—of Vermont's working lands enterprises is simple and sound: when we make things, like local food and forest products, we make Vermont what it is. And by extension, we will save forests—and all they do for us—by managing them thoughtfully and sustainably.

But this simply cannot happen without a vital and robust forest economy, including a thriving marketplace into which landowners can sell their logs and other products. We see mounting evidence that Vermont's forest economy is in trouble. Owing to many factors—from increased globalization and prohibitive costs of energy, labor and insurance to a shifting culture and various regulatory burdens—Vermont's forest and wood products sector has been in a years-long decline.

So that is why we've come together—to examine obstacles and opportunities and to help chart a return to a thriving forest economy. Over the year-long forest industry analysis that was funded by the Working Lands Enterprise Board and conducted by Yellow Wood Associates, it was gratifying and absolutely critical that so many Vermonters from such a wide swath of the sector came together to participate. We developed a shared understanding of the problems we face and we inspired each other to consider how we can shape our collective future.

This summary report of our year-long effort provides a snapshot of where we've been, some of what we've learned and more importantly, signals where we're headed over the coming year. For those who wish to read more of the details of the Yellow Wood analysis, summary documents of the focus groups, value chain workshops and the June 2015 Summit are all available.

We sincerely hope landowners, industry members, business service and capital providers, and policy makers will continue to engage with us. We have a lot of work ahead of us. We and Vermont's forest need you!

Michael Snyder
Commissioner
Vermont Department of Forests, Parks and Recreation

Forest Sector Systems Analysis: What Did We Do?

The Working Lands Enterprise Board (WLEB), working with Yellow Wood Associates, undertook a year-long Forest Sector Systems Analysis for the State of Vermont. The Board wanted to improve its understanding of the challenges and opportunities within the sector in order to inform its strategic investments through annual grant making.

After hiring Yellow Wood Associates (YW) to conduct the industry analysis, a Forestry Sub-Committee of WLEB actively engaged with YW through the entire process. Here's what was accomplished over the past year:

Over three years of grant making, WLEB has invested $661,535 in 25 forest enterprises and $609,281 in business assistance support for another 80 enterprises.

Conducted secondary research on market opportunities.

Conducted over 30 key informant interviews with industry members.

Received 175 responses to a Forestry and Wood Products Sector Survey of producers (a 31% response rate).

Completed an assessment of "Local Wood, Local Good" certification systems, and the marketing potential for Vermont sourced wood.

Conducted 4 focus groups in 4 regions of the state (Northeast Kingdom, Central Vermont, Northwest Vermont and Southern Vermont), with 50 participants total to discuss positive developments in the forestry and wood products sector, challenges to strengthening the sector, and opportunities for the future of the sector in Vermont.

Conducted 4 value chain workshops attended by a total of 74 participants in order to map out emerging opportunities for furniture and solid wood products, construction, wood energy and enhancing the economic value of Vermont's woodlands. These workshops involved landowners and loggers, foresters and truckers, sawmill owners and wholesalers, retailers and end users, government agencies, nonprofit organizations, educational institutions, financiers and investors, technical assistance providers, certifiers and others.

Organized a Statewide Summit, attended by 107 people in June 2015 to identify the most impactful changes that can drive progress toward identified goals in three subsectors—furniture and solid wood products, construction, and wood energy—and toward two identified public awareness goals.

Produced a series of documents summarizing what was learned throughout the year-long process which will be used to guide future action.

What did we learn through the analysis?

The year-long Yellow Wood assessment revealed that two types of investments are most needed to strengthen Vermont's forest and wood products sector:

- **GROWING CUSTOMER DEMAND:** Increase public awareness of the forest sector and ways in which landowners, Vermonters, and visitors to Vermont can contribute to and benefit from it.
- **GROWING THE SUPPLY:** Improve, create, and strengthen sub-sector value chains (6 possible product value chains within 3 sub-sectors were selected for thorough investigation).

We also learned that:

- Consumer demand exists in a variety of forest subsectors and there is a need to increase public awareness about the breadth of products made by its members.
- There is evidence of innovative thinking in the private sector with respect to demand.
- There is an opportunity to reframe perceptions of the forest sector through new messaging.
- There is an overall willingness by state government and industry members to engage and work towards a common purpose.
- Stakeholders expressed appreciation for renewed state government recognition of the economic significance of the sector.

Growing Customer Demand: Expanding Communication and Messaging to Consumers

During Yellow Wood's research, they found that firms need to understand more about consumer preferences and demand. Besides additional market research around consumer interest in specific forest products, two forms of public messaging were identified as being needed:

- Messaging for landowners about the relationship between landowner goals, forest stewardship, and the forest sector economy including specific calls to action, connections to local and state resources (e.g. foresters, educational opportunities, etc.), connections to primary and secondary processors or aggregators seeking inputs, landowner incentives, connections to energy security and state energy goals, and climate change.
- Messaging for Vermonters and visitors to Vermont that reframes the importance of the forest sector by making the connection between other emerging concerns such as climate change, energy security, small family businesses, local economies, and cultural heritage and broadens what people think of when they think about the forest sector.

Other landowner and consumer education opportunities were identified as well, including:

- the need to raise the visibility of markets for low grade wood and Vermont sourced wood
- the need to improve education and outreach offered by foresters and loggers to landowners, especially new landowners or those without experience with forest stewardship. This includes educating landowners about the benefits of sustainable harvesting on their properties and what the opportunities are for the wood they own (e.g., sawlogs, veneer logs, large timbers, low grade, etc.)

Growing the Supply: Developing Forest Sector Value Chains

A value chain—at an individual enterprise level—describes the full range of activities that are required to bring a product or service from conception, through the different phases of production, to the end consumer. Each step of the chain of activities gives the product more added value.

An industry level value chain is a set of activities that **a group of enterprises** perform in order to deliver a valuable product or service to the market. It recognizes that in many cases, no one firm can manage the whole production process from the needed raw inputs, all the way through to selling the finished product. Key to effective value chains are the relationships among the people and businesses whose skills and contributions are most needed to produce a good or service valued by buyers in the market.

Each participant in a value chain performs specific functions based on their core competencies, without which the chain could not operate effectively. Often, when a new value chain is being developed, there are functional gaps that must be filled either by existing businesses or, in some cases, by entrepreneurs starting new businesses.

The function that is most often missing is value chain coordination; individuals or organizations that hold the vision for the entire value chain while building the relationships among the partners that are required to make the value chain work. Value chain coordinators understand the self-interests and shared interests of the value chain partners. Shared interests are the areas where two or more value chain partners see benefit for themselves in working together.

During the year-long WLEB forest sector analysis process, we explored ways to improve market opportunities along six value chains, while dozens of other opportunities were also identified. The six value chains fall under three categories: Furniture and Solid Wood Products • Construction • Wood Energy

Furniture and Solid Wood Products

VALUE CHAIN OPPORTUNITIES:

1. Add greater value to the full range of local species (e.g., yellow birch, beech, eastern white pine).

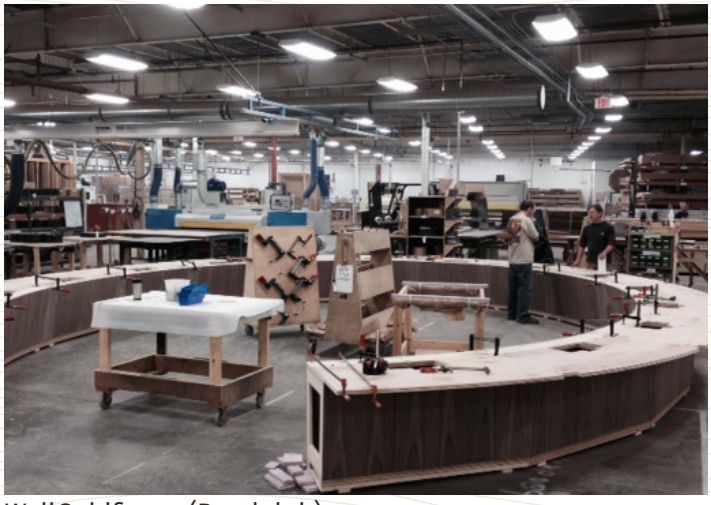
2. Provide a variety of affordable well-crafted entry-level furniture products from native species.

TO DO THIS WILL REQUIRE:

Coordination of all players in this sector.

A better understanding of consumer preferences.

Developing connectivity between primary producers of VT grown lumber, and the secondary users of that wood.



WallGoldfinger (Randolph)

PHOTO CREDIT: WALLGOLDFINGER

Copeland Furniture (Bradford)

PHOTO CREDIT: COPELAND FURNITURE

Construction

VALUE CHAIN OPPORTUNITIES:

3. Expanding the use of solid sawn lumber from locally grown tree species in residential, commercial and state of Vermont building projects, ski lodges, rest areas, universities, bridges, and landscaping.

4. Producing innovative, engineered wood products that are used in residential and commercial construction.

TO DO THIS WILL REQUIRE:

Supporting the development of wood trusses being manufactured in Vermont.

Developing testing and verification services for engineered wood products to insure quality and consistency.

Changing the state's institutional procurement policy to intentionally spec Vermont timbers into building projects.

Increasing the capacity of existing mills to handle large timbers.

Developing partnerships with research institutions to support greater innovation around engineered wood products which use raw materials from Vermont.

PHOTO CREDIT: VERMONT TIMBER WORKKS

Vermont Timber Works (Springfield)

"One of the bottlenecks common to all the value chains is inadequate information about the availability of raw materials, whether standing timber slated for harvest, logs, low-grade wood, lumber or other materials."

FOREST SECTOR SYSTEMS ANALYSIS: EXECUTIVE SUMMARY, YELLOW WOOD ASSOCIATES, JULY, 2015

Wood Energy

VALUE CHAIN OPPORTUNITIES:

5. Developing more consumer demand for modern wood heat.
6. Producing and consistently supplying ultra-high quality wood chips, wood pellets, and firewood.

TO DO THIS WILL REQUIRE:

More applied research to determine what consumers value about wood energy in all its forms and applications.

Developing a detailed roadmap showing the options for using wood to help meet Vermont's goal of 90% reliance on renewable energy.

Effective value chain coordination is needed to improve communication throughout the chain and catalyze action.

Splitting firewood.

PHOTO CREDIT: DAVE MANCE III

Vermont Renewable Fuels pellet delivery truck (Dorset)

PHOTO CREDIT: VERMONT RENEWABLE FUELS

Other Possible Value Chain Opportunities Identified By Industry Members

- Strengthen the pipeline of loggers through in-state training programs, including vocational programs at the high school and post high school levels through training and apprenticeship programs.
- Prepare to meet reduced lead time requirements of secondary manufacturers by addressing the question of who aggregates and stores lumber and who pays for that service.
- Increase and/or diversify in-state sawmill capacity to produce product for in-state secondary processors and others.
- Increase small-scale kiln operations that would cater to the small producer/individual and dry lumber that was harvested in Vermont.
- Centralize information on current and planned harvests in Vermont, so it is possible to know how much of what specifies is being harvested where in Vermont in real time. This could help improve trucking efficiencies for raw materials and could lead to other systems changes and efficiencies over time. A first step could be real time registration of harvesting (activities over a certain size) for properties in the Use Value Appraisal program.

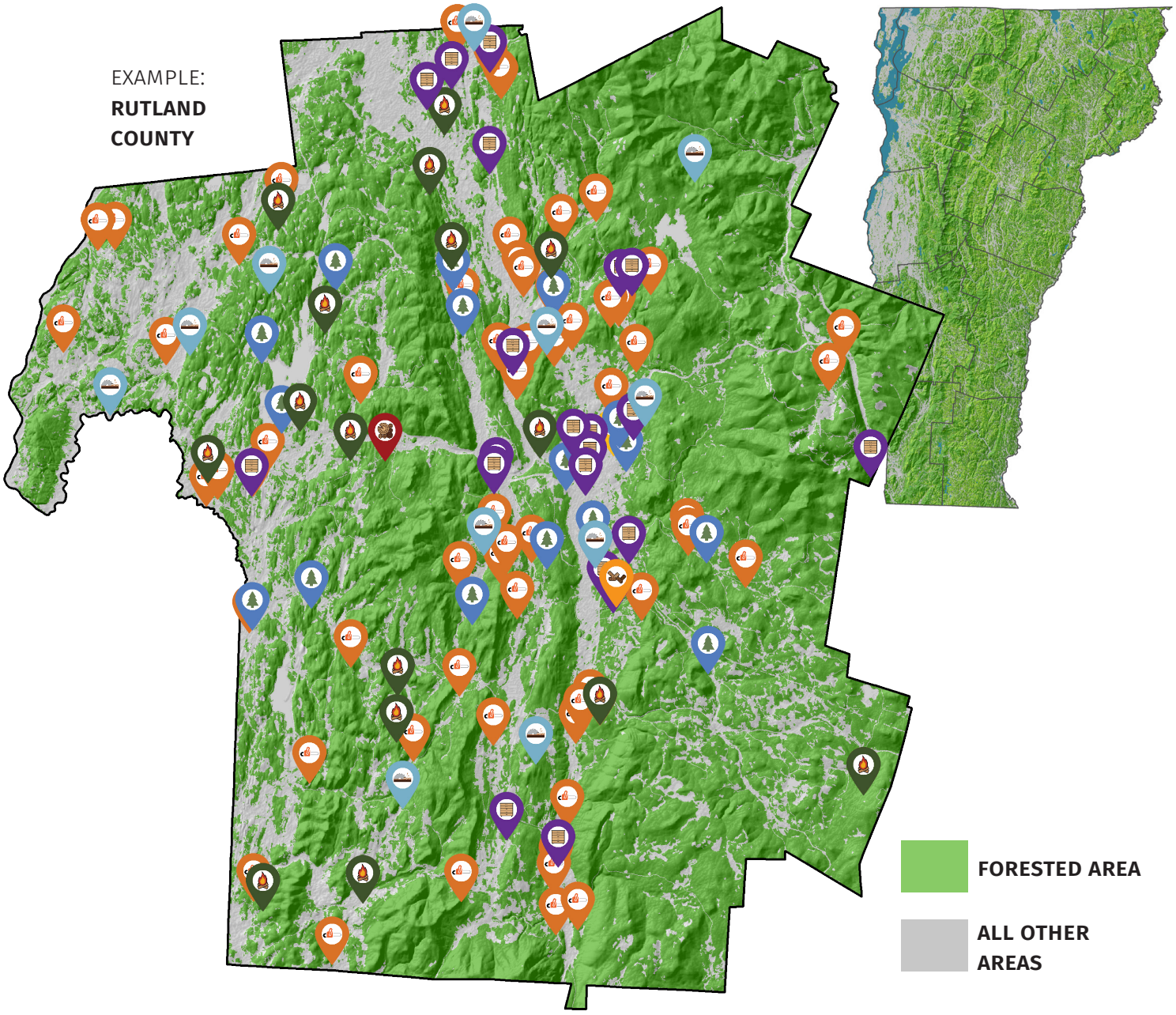
PHOTO CREDIT: VERMONT WILDWOODS

Parker Nichols, Vermont WildWoods (Marshfield)

"Vermont's forestry and wood products sector is driven by entrepreneurs at every level from foresters to loggers, to sawmills, craftsmen, and other secondary producers, including those in the energy sector."

FOREST SECTOR SYSTEMS ANALYSIS: EXECUTIVE SUMMARY, YELLOW WOOD ASSOCIATES, JULY, 2015

Vermont Forest & Wood Products Directory



Developed by the WLEB Forestry Sub-Committee, the Vermont Forest and Wood Products Directory aims to connect industry members to each other. It provides a visual representation of the types of businesses in the sector and their location around the state and also illustrates where there may be gaps in infrastructure. The map will be made publically available in early 2016 and will reside on the websites of the VT Department of Forest, Parks & Recreation, VT Agency of Agriculture, Food & Markets, and others.

- CONSULTING FORESTER
- LOGGER
- WOOD PRODUCTS
- EDUCATIONAL PROGRAM
- CONCENTRATION YARD
- SAWMILL
- WOOD PELLETS
- FIREWOOD DEALER

OUR NEXT STEPS

The Working Lands Enterprise Board is committed to making ongoing investments through its grant making in this sector. And the WLEB Forestry Sub-Committee continues to meet monthly to plan events and to support future network and value chain development efforts that are getting underway.

NETWORK DEVELOPMENT

Develop a network of forest and wood products sector organizations to unite around a common purpose. The Vermont Sustainable Jobs Fund, the WLEB Forestry Sub-Committee and the Northern Forest Center are collaborating and developing a plan to increase value chain coordination and to create a more formal network across the sector;

VIABLE VALUE CHAIN OPPORTUNITIES

Convene industry stakeholders interested in further exploring and then developing the value chain market opportunities identified through the Yellow Wood process;

IMPROVED PUBLIC AWARENESS

Work with existing forest and wood products sector trade associations to improve public awareness and outreach to Vermonters, tourists, and the media; stress the importance of forestry to Vermont's economy and healthy forests; and increase demand for the wide range of forest and wood products;

WOODLAND OWNERS ENGAGEMENT

Support efforts to connect woodland owners to the working lands businesses that depend upon their forests;

STRATEGIC FUNDING

Continue to invest in the forest and wood products sector through the Working Lands Enterprise grant program;

TECHNICAL ASSISTANCE

Continue to support business planning and technical assistance efforts offered by Vermont service providers.

PHOTO CREDIT: DAVE MANCE III

FSC

WLEB Forestry Sub-Committee

- Joe Nelson, Consulting Forester, Forestry Sub-Committee Chair
- Mike Snyder, Commissioner, Vermont Department of Forest, Parks and Recreation
- Jolinda LaClair, Deputy Secretary, Vermont Agency of Agriculture, Food and Markets
- Chris Castano, Champlain Hardwoods
- Jared Duval, Vermont Department of Economic Development
- Paul Frederick, Vermont Department of Forest, Parks and Recreation
- Ken Gagnon, Gagnon Lumber
- Ellen Kahler, Vermont Sustainable Jobs Fund
- Matt Langlais, Vermont Department of Forest, Parks and Recreation
- Emma Marvin, Butternut Mountain Farm
- Mike Rainville, Maple Landmark Woodcraft
- Kathleen Wanner, Vermont Woodlands Association

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Samantha Dunn
Melissa Levy

PHOTO CREDITS, FRONT COVER, CLOCKWISE FROM UPPER LEFT: Green Mountains- Scott Sawyer; logger- VT Department of Forest, Parks & Recreation; forwarder- Patrick White; David Hurwitz Originals; stack of lumber- Joe Nelson; log on sawmill- Joe Nelson; Butternut Mountain Farm- Emma Marvin; wood pellets- Vermont Wood Pellet Company; framing- Vermont Timber Works.

BACK COVER, CLOCKWISE FROM UPPER LEFT: Allard Lumber; Clarner Woodworks- Dan Kilborn; Cunningham family and forwarder- Dan Kilborn; Copeland Furniture; table- David Hurwitz; Burke Town School biomass valve system- Northern Forest Center.

FOR MORE INFORMATION: WORKING LANDS ENTERPRISE INITIATIVE

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