

Wisconsin's Forests and Forest Industries

Les Werner

Extension Northwoods Forum

Track 2: Enhancing Natural Resources

Northwoods Forest Industry: Labor Challenges & Solutions

Tuesday, May 7, 2024

Lac du Flambeau, WI

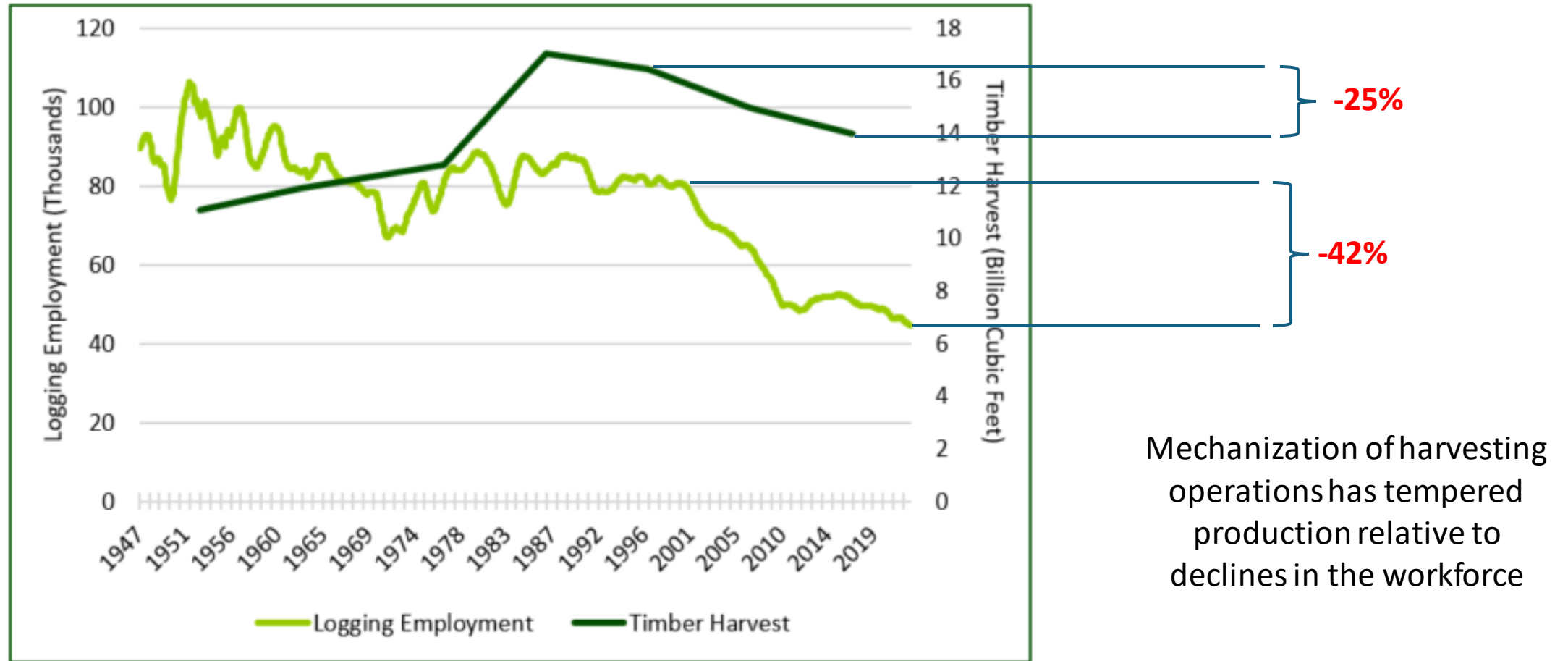


College of Natural Resources
University of Wisconsin - Stevens Point



Natural Resources Institute
DIVISION OF EXTENSION
UNIVERSITY OF WISCONSIN-MADISON

A Growing Concern



Mechanization of harvesting operations has tempered production relative to declines in the workforce

U.S. Timber Harvest and Logging Employment, 1947-2022. Sources: Bureau of Labor Statistics and USDA Forest Service.

A Growing Concern

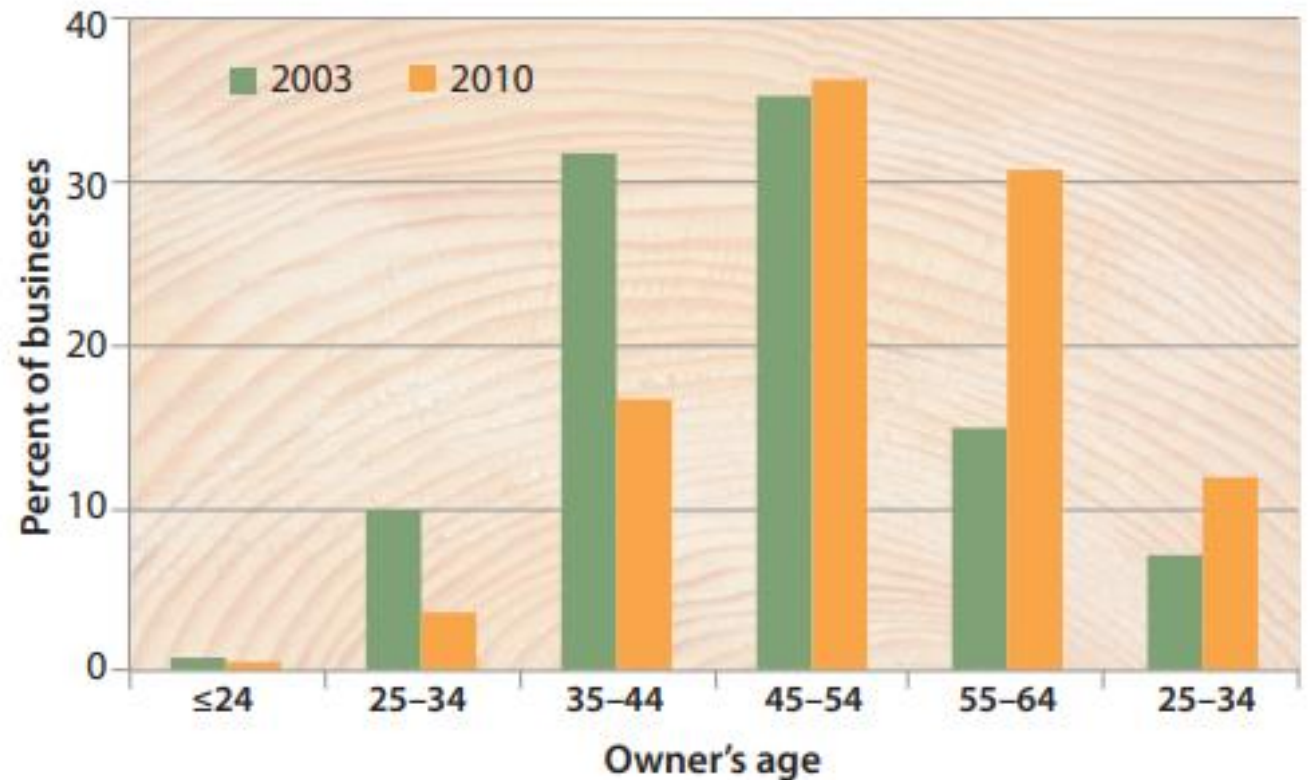
Persistent and ongoing need in the forestry industry for skilled entry-level employees due to:

- Aging workforce
- Declining number of businesses
- Workforce drain in rural areas
- Traditional recruitment venues not meeting needs

Threats

- Supply chain issues
- Start-ups/expansion

FIGURE 13. Distribution of logging business owners by decade cohort, 2003 and 2010.



A Growing Concern

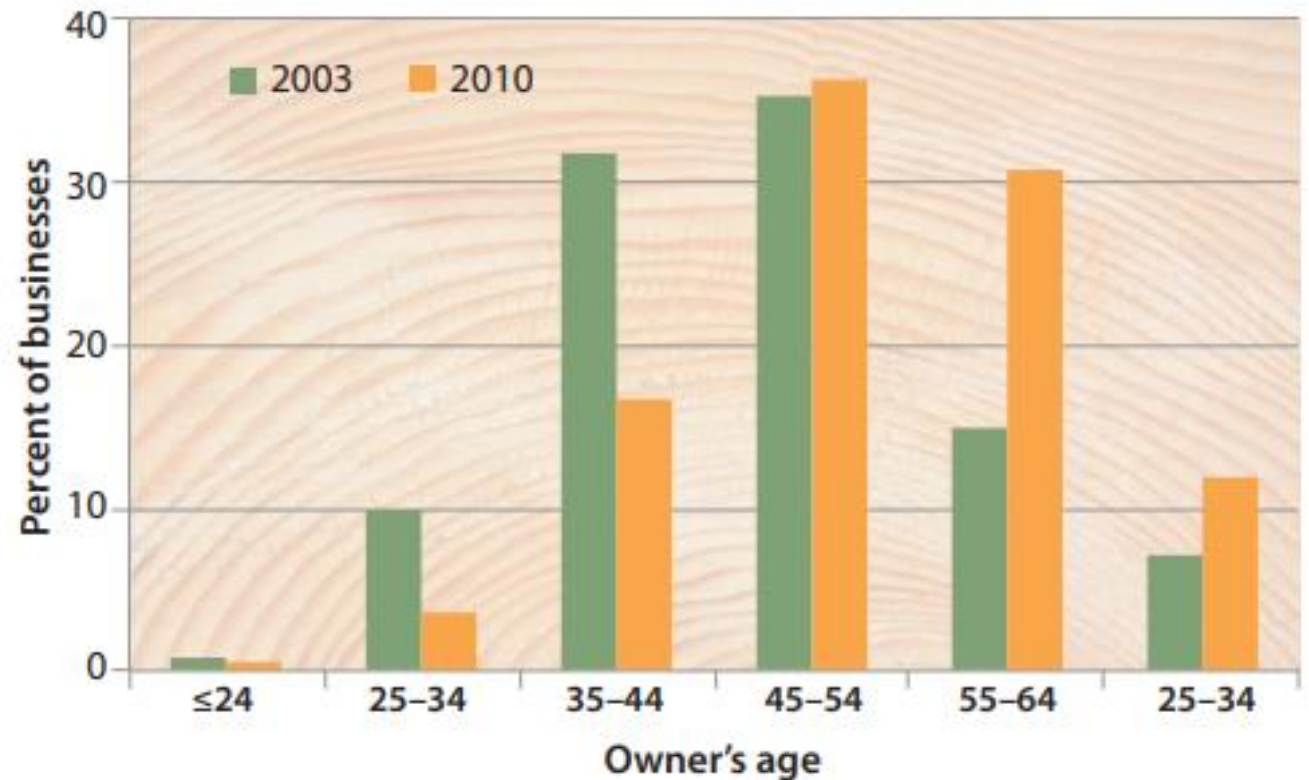
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How and where do we recruit and train the next generation of workers in the timber harvesting and manufacturing sectors?

Wisconsin Forestry Careers Coalition



Wisconsin Workforce Innovation Grant

- \$8 million over 3 years

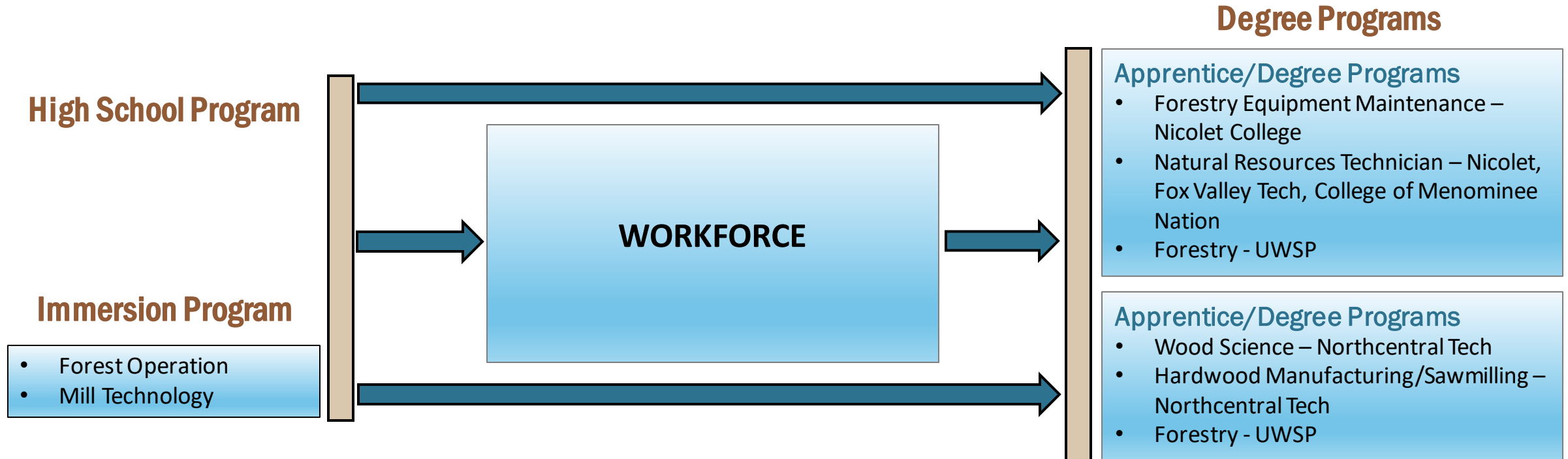
[Wisconsin Forestry Careers Coalition - Wisconsin Forestry Center | UWSP](#)

Coalition Objectives



- Develop a career pathway program consisting of **applied high school curriculum** and short-duration **immersion training programs**.
- Promote the full spectrum of career and entrepreneurial opportunities in forestry and the forest products industries through education and public outreach.

Pathway Program



High School Program: 4 Credits at UWSP*

Immersion Program: 6 Credits at UWSP*

Applied Forestry High School Curriculum

	Training Modules				
	Tree ID & Biology (1)	Forest Health (2)	Silviculture (3)	Forest Products (4)	Skills Camp
Content Areas	General tree anatomy & structure Tree identification by leaf, twig, and form Dichotomous key use	General forest health Invasive species identification Forest disease identification Forest pest identification	Land measurements Tree measurements Timber Harvesting General safety, inspection, and operation Prescribed fire	Types of forest products and services Primary and secondary wood products Mill and kiln operation Types of lumber Wood identification Log grading Lumber grading Business of forestry	Tree identification Chainsaw safety & tree felling Equipment operation Milling and drying Log and lumber grading
<ul style="list-style-type: none"> • Modules/skills associated with the applied curriculum are adaptable • Lesson plans & exercises are cross listed against Wisconsin DPI Teaching Standards 					

Applied Forestry: Forest Operations



The WFC provides simulators, mills, kilns, and equipment trailers to participating HS

Applied Forestry: Skills Camp - Equipment Operation



Train-the-Teacher Workshops

Training sessions

- Timber harvester/forwarder simulator (2 days)
- Chainsaw operation/hand felling (1 day)
- Milling & Kiln Drying (1 day)*
- Log Scaling & Grading (1 day)
- Lumber Grading (1 day)
- Forest health & Tree ID (1 day)
- Silviculture (2 days)*
- *Externship Opportunity*



Forest Operations Immersion Program (240 h)

Course 1 - Introduction to Forestry	Course 2 - Forestry Equipment Maintenance	Course 3 - Forestry Equipment Operations			
		Module 1- Chainsaw	Module 2- Mechanical Felling	Module 3-Log Transport	Module 4-Forest Roads
Tree Biology and Identification	Hydraulics	Chainsaw Overview	Harvester Owners Training	Forwarder Owners Training	Forest Road Construction
Compass/Public Land Survey	Electrical	Felling Theory	Ponsse Simulator Startup and Overview	Forwarder Controls and Operation with SimTrainer Exercises	Forest Road Maintenance
Forest Management and Silviculture	Welding and Cutting	Demo/Practice Notching, Boring on Bolts	Ponsse Harvester Controls and Operation with SimTrainer Exercises	Forwarder Operation and Ride Along	BMPs for Water Quality
Forest & Tree Measurements	Workshop fundamentals	Felling Trees	Harvester Operation and Ride Along	Skid Steer Operation	Dozer Operation
Harvesting Systems Overview		Merchandizing Fallen Trees	Harvester Maintenance Essentials	Tractor and Log Bunk Operation	Skid Steer Operation
				Maintenance	



Mill Technology Certificate Program (200 h)

Module				
Sawmill Safety & Maintenance	Sawmill Operations Overview	Introduction to Hardwood Grading	Introduction to Kiln Drying	Lumber Manufacturing
OSHA basics	Mill Types & Product Lines	Surface Measure	Drying Methods	Primary Breakdown Sawing Patterns
PPE requirements	Machine Centers and Flow	Defect ID	Moisture Content	Carriage Operation
Lock Out/Tag Out	Wood Science	Cutting Units	Loading Kilns	Secondary Breakdown
Changing Saw Blades	Lumber Markets	Standard NHLA grades	Kiln Controls	Pre-turner for grade and cant sizing
Routine Maintenance Schedules	Efficiency Metrics	Railroad Tie Grading	Drying Schedules	Edging
Log ID, Scaling & Grading				Trimming
Equipment Calibration				



Antigo Saw Mill Addition



Thanks to our Partners

UW-Stevens Point College of Natural Resources

Northcentral Technical College

Nicolet College

University of Wisconsin-Madison, Division of Extension

LEAF – Wisconsin’s K-12 Forestry Education Program

Menominee Indian High School

Tomahawk High School

Antigo High School

Merrill High School

Rhineland High School

Cooperative Educational Service Agency (CESA) 8 and 9

Milwaukee Tool

Ponsse North America

Case Construction – Tomahawk Customer Center

Cleereman Industries

Tigerton Lumber Co.

Kretz Lumber Co., Inc.

Menominee Tribal Enterprises

Wisconsin Department of Natural Resources-Division of Forestry

Wisconsin Board of Commissioners of Public Lands

Great Lakes Timber Professionals Association

Wisconsin Chapter—Society of American Foresters

Grow North

New North

Snipping Tool
New Mode Delay
Select the snip mode using the Mode button or click the New button.

Thank You!

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[Wisconsin Forestry Center - University of Wisconsin-Stevens Point \(uwsp.edu\)](http://uwsp.edu)

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