



Joint Institute for Wood Products Innovation Scope of Work Outline

Overview of Wood Innovation: Products and Key Market Indicators

Visual matrix: Wood innovation products vs. key success indicators and market factor

Products

- Pyrolysis (chars/activated carbon and torrefied wood, fuels, high-value chemicals)
- Wood-based composites (veneers, composite materials)
- Structural laminates (glulam, CLT, Mass plywood, nail and dowel-laminated timber)
- Non-structural wood (low-value wood products, including palettes and dunnage)
- Chemicals and extractives
- Bioenergy
- Nanomaterials
- Liquid fuels (biooil, cellulosic ethanol)

Market indicators

- Minimum feedstock required (numerical)
- Carbon sequestration (binary)
- Commercial readiness level (informed numerical ranking)
- Technological readiness level (informed numerical ranking)
- Potential market size (categorical: S, M, L)
- Feedstock use (binary – does it use otherwise nonmerchantable wood)
- Research or analysis need (binary)
- Can Institute significantly influence outcomes (binary)
- International markets (binary – Do they exist?)

Three-fold color coding

- Degree of institute prioritization recommended
- Degree of research gap identified
- Degree of potential to increase pace and scale of sustainable forestry

Product overview

- Definitions/summary of each product
- List of existing wood products in California
- Justification for products included in analysis

Break down of success indicators/market factors chosen and why

Market indicators: Analysis of areas marked as greatest barriers to product or process innovation and growth

Research gaps: Identify areas where further research is needed

Opportunities for influence: Analysis of areas of potential Institute influence

Substitutions: Describe markets that are being displaced by innovative wood products and how that impacts carbon sequestration (wood fiber, plastics, fossil fuels, OSM, single use plastics, etc.)

Introduction: Why are CA Wood Innovation Markets Not Meeting Expectations?

Cross-laminated Timber, Structural, and Non-Structural Wood Innovation

Pyrolysis Innovation

Supply Predictability Across Wood Innovation Products

Evaluate potential for generating consistent supply under two platforms

Master Stewardship Agreement (MSA) for public lands

Buffer Wood Initiative (near existing forest service roads, on public and private lands)

California Feedstock and High Potential Areas for Innovation

Competitive species options

Certified supply options

Hardwoods market potential as separate from softwoods

Product substitution potential and supply requirements for buffer wood

Organizational Interviews and Strategic Partnership Recommendations