

2022 Q1 Quarterly Investment Update

Winners Announced for \$2M Mass Timber Competition

The Softwood Lumber Board and the USDA Forest Service recently announced the winners of the *Mass Timber Competition: Building to Net-Zero Carbon*. This year's competition awarded \$2 million in funding to six building projects, chosen for their potential to showcase mass timber's application, commercial viability, replicability, and carbon benefits.

The winning projects are:

- The 176,000-square-foot Vancouver Ambulatory Care Center medical facility in Vancouver, Washington.
- Return to Form, a 12-story multifamily and retail project in Denver, Colorado, which will include affordable housing units.
- Evergreen Charter School's 85,000-square-foot gymnasium in Hempstead, New York.
- A 42,456-square-foot industrial warehouse for Alaskan Copper & Brass in Kent, Washington.
- INTRO Phase 2, a multifamily high-rise building in downtown Cleveland, Ohio.
- Killingsworth, an 18,780-square-foot community-centric office building in Portland, Oregon.

These projects were selected out of a pool of 59 entries from across the continental United States and Hawaii for projects ranging in height from one to 16 stories and as large as 540,000 square feet. The nine-member judging panel—which included experts in architecture, engineering, sustainability, fire safety, and corporate real estate—was itself carefully crafted to tap into and ensure representation of the wide-ranging considerations that go into effective mass timber design and construction.

SLB-commissioned research conducted by Forest Economic Advisors in 2021 identified a potential of more than 2.41 billion board feet of incremental opportunity for mass timber, including hybrid systems, by 2035. The *Mass Timber Competition* is an important, engaging way to help this opportunity come to fruition by unlocking innovation, generating excitement for

mass timber construction, and strengthening the business case for mass timber across building types and as a pre-eminent low-carbon building solution. The SLB and USDA have already announced their intent to host another round of the Mass Timber Competition in 2023.

"One aspect of managing healthy, resilient forests is sustainable harvesting. Our overstocked forests are vulnerable to a number of issues, namely wildfires. As wildfires become more prevalent across the United States, mass timber supports not just forest health but low carbon buildings – both vital tools in mitigating the impacts of climate change."

John Crockett, USDA Forest Service Associate Deputy Chief of State and Private Forestry

487 MILLION BOARD FEET OF INCREMENTAL DEMAND GENERATED IN Q1 2022



THE CARBON BENEFIT FOR 2022 Q1 REPORTED PROJECTS

was 1.3 million metric tons of carbon dioxide emissions.



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The AWC Advances Opportunities for Wood During ICC Group B Hearings

The American Wood Council effectively represented the interests of the softwood lumber industry during recent International Code Council Group B Code Development Hearings in Rochester, New York. AWC staff held several influential committee positions at the hearings, including two chairmanships, and were active across committees in creating and protecting opportunities for wood.

Using the latest data and building science, the AWC put forward 18 wood-friendly code change proposals that were recommended for approval, including proposals to update AWC reference standards such as the NDS for Wood Construction and Wood Frame Construction Manual; add ASTM D8391 regarding fire protection; and modify snow and wind load maps.

The AWC also contributed to the disapproval or modification of 44 of 49 proposals identified as threats to wood. This included a proposal that would have added criteria for how manufacturers label products; the criteria were at odds with the wood products industry's current quality-assurance process.

The ICC will hold additional public hearings on recommended changes in September, followed by final online voting.

Results Multiply Under Think Wood's Communications Model

Two years ago, the SLB and Think Wood re-envisioned and reinvigorated the SLB's communications strategy by placing a sharp focus on lead acquisition, nurturing, and cultivating projects for conversion. While trending favorably ever since, Think Wood's Q1 2022 performance suggests that this approach is taking off and is set to pay big dividends for the industry.

In Q1, Think Wood delivered growth—in some cases exponential—in each of its seven key performance metrics, including 49% year-over-year growth in marketing qualified leads and 490% year-over-year growth in sales qualified leads. Conversions of leads into active projects were up 16%, with Think Wood generating four new projects totaling 400,000 square feet of construction. Think Wood also tallied 20 touchpoint projects, wherein Think Wood provided education or a referral but a partner functioned as lead. All told, these figures suggest an exciting acceleration in the scale and quality of leads generated and delivered to WoodWorks.

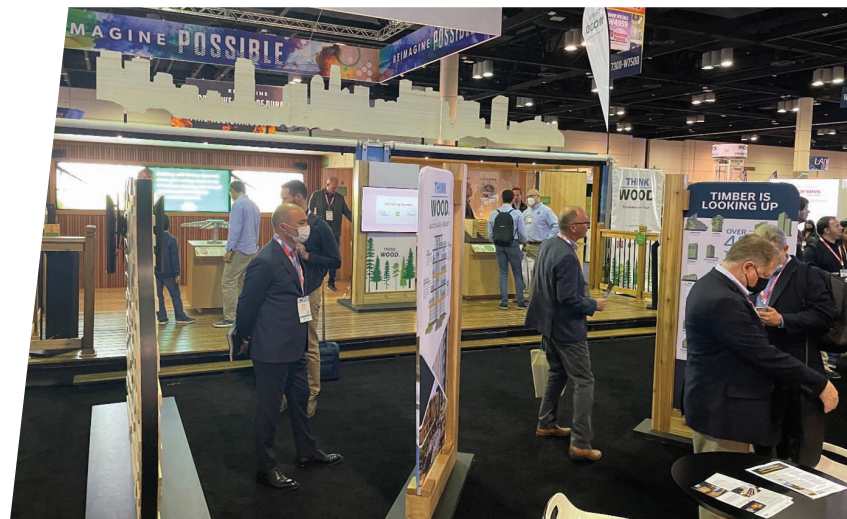
Think Wood's resources are a key entry point for specifiers in this process. For example, in Q1, Think Wood and WoodWorks

released Volume 2 of their popular *Mass Timber Design Manual*. The new volume—available for free download—features more than 30 pages of new content, including 10 new case studies on cutting-edge timber projects. The first edition was downloaded over 18,000 times and led to 267 requests for design/build support from WoodWorks. In its first week, Volume 2 scored 2,000-plus downloads and dozens of support requests.

The Think Wood Mobile Tour Launches 2022 Season

The Think Wood Mobile Tour kicked off its 2022 season in February by exhibiting among the 45,000 attendees at this year's International Builders' Show in Orlando, Florida. Mobile Tour staff and representatives from co-exhibiting partner species associations, including SLMA, WRCLA, NelMA, WWPI, and WWPA, welcomed hundreds of visitors to the exhibit and noted high levels of interest and enthusiasm for wood's story.

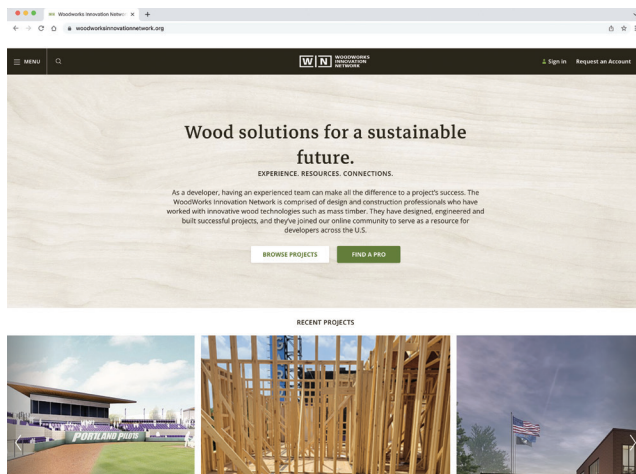
In March, the Mobile Tour made a stop at the AGC Construction Association Convention, held in Grapevine, Texas. This was the Mobile Tour's first visit to this show, which primarily attracts AGC-member contractors. Joined by four representatives from WoodWorks, the Mobile Tour was one of the show's largest exhibitors and elicited extensive discussions on material characteristics and mass timber product availability with and among the show's 500 attendees.



The Mobile Tour has several more stops scheduled this year, including the International Code Council Expo in September in Louisville, Kentucky, and the American Society of Landscape Architects Expo in November in San Francisco. Keep up with the tour at thinkwood.com/tour.

WoodWorks Works to Scale, Break Down Barriers

WoodWorks is well known as a trusted source of high-quality technical support for wood projects. Beyond individual project support, WoodWorks is constantly working to cost-effectively scale up its reach and remove key barriers that stand in the way of building with wood.



In Q1, the online WoodWorks Innovation Network (WIN) transitioned from a free platform to an annual paid membership service. Membership in WIN enables wood design and construction professionals to network, exchange what they learn, and promote their work among developers and their peers through exclusive events, member spotlights, and project case studies. WIN also now offers a Community Membership designed for educators and young professionals who have accessed WoodWorks education events but are not yet eligible for full membership.

WIN has recorded steady growth since its launch in 2020 and currently includes 289 individual, 226 company, and 278 project profiles. WIN is proving an effective vehicle to connect qualified practitioners who have worked on real-world wood projects with those who aspire to build with wood for the first time or in a new-to-them application. WIN is working to expand its reach and offerings for innovative light-frame projects to enhance its value to the industry.

WoodWorks also continued its efforts to build insurance industry's understanding and acceptance of mass timber building performance. WoodWorks entered a yearlong engagement with global insurance firm Marsh Brokerage to educate the insurance industry about mass timber buildings and risks through education events, focus group meetings, and strategy and resource development. Past research supported by ClimateWorks singled out higher-than-expected project costs—including prohibitively high insurance premiums—as a key reason many design teams opt not to build with wood.

SLB Education Ramps Up Partnerships and Presence

The SLB's Education program is working to rapidly leverage new partnerships and pilot new initiatives to refine its approach and increase impact and reach among the next generation of wood designers, builders, and specifiers.

As part of its partnership with the American Institute of Architecture Students, the SLB sponsored a four-day South Quad Conference with AIAS chapters at Auburn University and the Georgia Institute of Technology. Through its involvement, the SLB positioned innovative wood products as a sustainable building solution and helped students gain firsthand knowledge of mass timber's performance during a visit to Georgia Tech's Digital Fabrication Lab. This was the SLB's second foray into Georgia during Q1—the SLB also supported the Georgia Forestry Foundation in fabricating an outdoor display demonstrating the design, sustainability, and economic benefits of mass timber construction.



The SLB is funding an upcoming four-day Timber Design Faculty Development Workshop in partnership with Clemson University's School of Architecture and Wood Utilization + Design Institute. The workshop aims to empower university faculty to introduce and increase the use of wood topics at their institutions. If this model is successful, the SLB envisions repeating it in other regions and disciplines, including engineering and construction management.

At the postgraduate level, the SLB is funding two partial scholarships for U.S.-based candidates to participate in a 10-month, online master's degree program in timber design—the only one of its kind—at the Institute for Advanced Architecture of Catalonia in Spain during the 2022-23 school year. The SLB further supported the degree program by providing an honorarium for a guest lecturer during the current IAAC program year.

Q1 PROGRAM HIGHLIGHTS

Code:

American Wood Council

- Eighteen AWC-submitted proposals were recommended for approval during recent ICC Group B Hearings, and the AWC successfully defended against 44 proposals that were unfavorable to wood.
- The AWC launched a platform to collect member manufacturing data in order to improve environmental product declarations, and it is set to meet or exceed its 75% member-participation target.
- The AWC sponsored the first of five regional TimberStrong Design-Build Competitions in partnership with the APA, Simpson Strong-Tie, and the American Society of Civil Engineers to enable university-level students to gain firsthand experience designing and building with wood.
- The AWC published its peer-reviewed results on the resilience of CLT diaphragms and shear walls in the *Journal of Structural Engineering*.

Communications:

Think Wood

- Think Wood's lead-nurturing program generated four new building projects in Q1, totaling approximately 400,000 square feet of construction. Conversion of Think Wood sales qualified leads into active projects increased 16% versus the previous year.
- Think Wood education or referrals led to the conversion of 20 additional reported touchpoint projects.
- Two-thirds of marketing qualified leads and nearly three-fourths of prospects ranked themselves as "very likely to specify wood"; both figures represent 3 to 5% increases from prior surveying and the highest-ever scores since the survey began in 2020.
- Think Woods email promotions led to more than 6,000 resource downloads, led by the *Mass Timber Design Guide + Case Studies* and *2022 Timber Trends*.



Educational Events



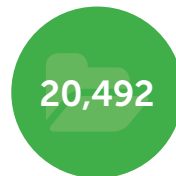
Education Attendees



Contact Hours Provided



New Contacts



Resource Downloads



Marketing Qualified Leads





AMERICAN
WOOD
COUNCIL

THINK
WOOD®



Construction and Conversion:

WoodWorks

- In Q1 2022, WoodWorks directly influenced and converted 119 projects, which resulted in the construction of 23 million square feet of building space and the incremental consumption of 212 million board feet of timber (mmbf) of lumber.
- WoodWorks is supporting 1.2 million square feet of mass timber building construction via the SLB and USDA-funded Boston Planning & Development Agency and Boston Society for Architecture Competition.
- WoodWorks' Mass Timber Construction Management program expanded with the delivery of eight mock-ups and the launch of two new training centers in NYC.
- WoodWorks published three new Solution Papers, three case studies of innovative wood projects, and five feature projects.
- WoodWorks held 810 individual meetings and established 1,347 new contacts through 88 events and speaking engagements.

Education:

- The Wood Institute now includes 177 courses and a new blog that covers mostly design and sustainability topics in response to audience interest and demand. The SLB is harnessing Google's analytics to drive increased engagement on the site.
- The AWC reached more than 5,570 building professionals and provided over 6,400 contact hours through 34 education and fire service training events.
- Over 4,600 Think Wood continuing education units were delivered in Q1, a 15% increase year over year.
- WoodWorks delivered 9,104 practitioner education hours.



Projects
Converted



MMBF of
Incremental
Lumber



Education
Hours



New
Users



Courses
Completed



Total Courses
Available

*Numbers pertain to the SLB's contribution to each program's annual budget.

Terrace House, Type V-A,
308,142 board feet. Courtesy: SuperLA®

Princeton Embodied Computation Lab, Type IV,
128,000 board feet. Courtesy: Michael Moran, Pablo Marvel



Study Finds Forest Inventory Can Meet Wood Product Demand

Think Wood recently completed new research on the United States' softwood timber supply to assess if rising demand for wood products, including mass timber, could result in unsustainable harvesting levels. Using USDA Forest Inventory and Analysis data, the study revealed that U.S. forest growth exceeds harvest levels, and these forests can sustainably produce more than adequate supplies of timber. These findings were true even in the most conservative scenario, using the lowest estimate of tree growth and the highest estimate of harvest volumes required to meet incremental demand for lumber and mass timber in 2035.



As part of the study's mass timber–demand analysis, researchers also assessed areas of opportunity to sustainably increase harvesting beyond current levels by looking at underutilized growth by state, owner, and region. These sources could meet increased demand and make U.S. forests more resilient without requiring policy changes. These sources include privately owned forests in the South; overstocked national forests in Washington, Oregon, and California; and added processing capacity in eastern Washington and Oregon.

The Binational Softwood Lumber Council funded the research, which was undertaken in partnership with the University of Washington's Center for International Trade in Forest Products and the Natural Resource Spatial Informatics Group. Findings were published in the journal *Sustainability* and were presented during a well-received forestry panel at the International Mass Timber Conference in April. Think Wood also developed a fact sheet summarizing the findings, which is being distributed by the AWC, WoodWorks, the National Alliance of Forest Owners, and the U.S. Endowment for Forestry and Communities.

All U.S. Mass Timber Manufacturers Are Now WoodWorks Partners

Part of WoodWorks' strategy to grow the market for wood is to include all structural wood products in its expertise, building credibility by helping project teams find appropriate wood solutions. With the relative newness of the mass timber market segment, WoodWorks has taken an aggressive, multipronged approach to building its success, including:

- **Project support:** Design and construction teams have requested—and WoodWorks has provided—technical assistance on the majority (76%) of modern mass timber projects built in the United States. WoodWorks tracks mass timber projects through various means and, as of March 2022, is aware of 1,384 mass timber projects constructed in the United States. This figure includes modern mass timber and post-and-beam structures built since 2013.
- **Education/resources:** By filling education gaps, WoodWorks is making mass timber a viable option for professionals who are new to these materials.
- **Manufacturer engagement:** Because it works directly with the architecture, engineering, and construction community, WoodWorks is well positioned to raise awareness of individual manufacturers and connect them with project teams. It does this through a “procurement leave-behind” provided as a resource at every client meeting, as well as through vehicles such as WIN, social media, case studies, and events like the International Mass Timber Conference and AIA Conference on Architecture, both of which WoodWorks co-hosted.

Manufacturers are clearly seeing value from the additional brand recognition. WoodWorks now receives financial support from all U.S. mass timber manufacturers. It also receives support from all western Canadian manufacturers and nearly all eastern Canadian manufacturers, who use WoodWorks to reach potential customers in the largest market for Canadian wood products.

For partner manufacturers seeking to increase their engagement in 2022, key areas include WIN, the procurement leave-behind, and a manufacturer and supplier directory. Partners are also invited to meet with WoodWorks technical staff to ensure they have in-depth product information when supporting relevant projects. With a partnership base that includes the spectrum of wood products, WoodWorks is well positioned to help any project team find an appropriate wood solution over alternate materials.

SLB Builds Wood's Case as a Low-Carbon Solution

The SLB and its partners made substantial progress toward developing tools to improve the wood industry's carbon accounting and enable it to tell wood's complete carbon story.

The new A4 Transportation Tool is complete and underwent a technical review by USDA's Forest Products Lab. AWC has taken over management and implementation, including its integration into existing whole building and other life cycle assessment tools. The A4 Tool makes the average CO₂ equivalent transportation-to-site metric available for each region, based on product origin, modes of transportation, and distances.



The Fiber Sourcing Transparency Tool methodology has been drafted based on mill data and technical input provided by six partnering wood manufacturers, and a pilot website is currently under development. When launched in Q1 2023, the tool will provide the design and building communities with accurate, easy-to-access sustainability and forest certification data.

National Council for Air and Stream Improvement, Inc. (NCASI) and Dr. Edie Sonne Hall have drafted an article that outlines a methodology for the Woodshed Carbon Balance tool, in collaboration with USDA. It will be submitted to a peer-reviewed journal for publication. USDA's early and active involvement is critical, as they intend to integrate the new tool into the next phase of their Carbon Online Estimator tool.

All three of these tools are supported in part by the U.S. Endowment for Forestry and Communities and will make important contributions toward filling gaps in carbon accounting data across the wood products value chain.

The Push For Transparency

By Rachel Jamison, Vice President, Markets & Sustainability, American Wood Council

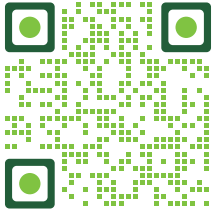
The climate benefits afforded by forests and the wood products they produce are undeniable. Yet for the wood products industry to truly leverage these benefits as a comparative business advantage, we must be ready to document and tell wood's complete carbon story.

With urgency, governments and businesses are taking significant steps to reduce their greenhouse gas emissions and carbon footprints. For its part, the wood products sector is moving quickly to collect data that is necessary to assure specifiers of the sustainability of our products, from forest to building site. The SLB and its partners—including the AWC, which leads the development of an industry-wide life-cycle data-collection platform—are approaching questions around the climate impact of wood products from the standpoint of radical transparency: If the market has a question, we must be able to provide a defensible answer rooted in data.

Climate change has set the stage for wood products to emerge in the market as not only a low-carbon building material but also a leading climate solution. When buildings are made with wood, their embodied carbon footprint is drastically reduced, and the buildings themselves become carbon storage units for the buildings' lifetime (and beyond in cases where wood material is reused).

The more data we can provide specifiers—from details about fiber sourcing to the emissions created by transporting materials—the more we, as an industry, can unequivocally demonstrate wood products' superior climate performance and seize these as a competitive advantage. If we fail to embrace transparency, we will run the risk of wood being looked over by specifiers who are committed—and increasingly required—to demonstrating the sustainability of their material supply chains. Continuing to invest and engage in robust data-collection efforts is the key to our emerging as the winner in these new market conditions.





FEA Expects Ongoing High Demand, Strained Supply

According to SLB-commissioned analysis by Forest Economic Advisors (FEA), North American lumber markets will continue to experience high demand indefinitely, driven by booming residential construction and renovation and remodeling markets. Production has only modestly increased over the past two years; thus, the analysis expects that supply will struggle to keep up. The FEA will provide an updated analysis of these trends to SLB investors later this year; stay tuned.

Tracking New Market Opportunities and Threats

The SLB's Ad Hoc Working Groups continue to proactively investigate emerging opportunities and possible challenges to softwood lumber markets. At the SLB's behest, the FEA assessed the current market opportunity for timber bridges in the United States under current conditions. The market share is low, with an annual volume opportunity of 40 to 513 mmbf. Significant barriers also exist, including low levels of awareness and familiarity with wood among bridge specifiers.

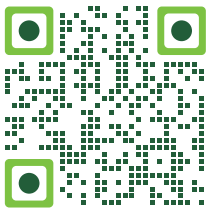
The Working Group also met to discuss the potential threat posed by 3D-printed homes to light-frame single-family home construction. Available data indicates that 3D-printed homes do not yet—and perhaps may never—occur at a scale that immediately threatens wood's market share. The SLB will continue to track these trends and be ready to respond should market conditions warrant further action.

The SLB Adds Value Through Expanded Partnership Program

The SLB has long teamed with its species association partners to create a powerful wood presence at popular trade shows. Now, the SLB is embarking on several new partnerships and ventures to expand its Partnership Program and create additional shared value. To better defend against competing materials in single-family residential construction, the SLB is partnering with the Energy & Environmental Building Alliance (EEBA) to establish a professional designation for low-carbon building experts, the "Net-Zero Carbon Building Professional." To earn the designation, individuals must complete a four-part course in low-carbon building science and accounting and pass a final exam. The new designation will join six other designations overseen by EEBA, including those focused on zero energy and healthier homes.

The SLB is co-funding the design and fabrication of an interactive exhibit at the Fairbanks Museum and Planetarium that examines the role of wood and mass timber in construction. The exhibit will be a clear complement to the museum, which itself is undergoing an expansion using cross laminated timber from locally sourced hemlock.

The SLB is teaming with the Southeastern Lumber Manufacturers Association and the Southern Forest Products Association to commission compelling photography and video footage of southern yellow pine going from managed forests to its final destination in single-family homes. By pooling together, all three organizations will tap into beautiful new imagery to tell wood's story in their respective communications and marketing.



The SLB's 2021 Results are In

The SLB recently published its 2021 Annual Report. For the 10th straight year, the SLB delivered year-over-year growth in demand and impact for the softwood lumber industry, generating more than 1.8 bbf of incremental demand. Since 2012, the SLB and its partners have cumulatively generated more than 9.8 bbf in demand and delivered an average return of \$39.82 for every \$1 invested.