



**Joint Institute for Wood Products Innovation Staff Memo**  
**Possible Projects for New Contracts**  
December 10, 2020

Due to the State contract process, the Joint Institute for Wood Products Innovation (Institute) will be discussing possible projects and contracts for current available funds (\$450,000) at the December 11, 2020 meeting with the intent of identifying those projects that will best align with Institute goals. With a June 30, 2021 encumbrance deadline and a 6-month lead time to secure contracts, it is imperative that projects be identified. Chosen projects will be presented to the Board of Forestry and Fire Protection at their January meeting for Board consideration.

The projects listed below are those that have been identified as possible options. Additional ideas may be presented and considered at the December 11, 2020 meeting.

**Cellulosic nanomaterials**

- Reduce carbon impact of cement with cellulose nanocrystals: Continue preliminary work by the US Forest Service (USFS) and US Endowment for refining engineering design and costs associated with a small-scale cellulose nanocrystal (CNC) manufacturing plant, and work with Dr. Jason Weiss (OSU) to expand CNC cement demonstration projects in CA in partnership with US Endowment and USFS Forest Products Lab (e.g. curbs/gutters). (\$150,000 - \$200,000)

**Chemically/Thermally Modified Wood**

- Home hardening/decking and fencing demonstration project. Can you thermally modify second growth incense cedar or redwood? If so, how low of a grade can you go and still be commercially desirable?

**General**

- Small industrial mill (5 – 15 MMBF log scale input): Design, select 2-3 potentially viable locations, and work with local, interested industry or non-profits to evaluate feasibility, with the end-result of a package that will be available for potential investors and for use as a template for additional small industrial mills. (\$50,000 - \$100,000)
- Data collection: Pile burning, decay, and carbon emissions data are lacking or not accessible.
- Emissions benefits of forest residue mobilization. [Expansion of C-BREC model] (Partner HSU)

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### **Low-carbon gaseous and liquid fuels**

- Feasibility from forest biofuels production at existing biopower facilities and CO<sub>2</sub> sequestration in Staten Island, CA. (Partner: Nature Conservancy)

### **Mass Timber**

- Production of structural wood products from nonmerchantable CA wood.