

Opportunity Title: USFS Postdoctoral Fellowship in Biomass Sustainability

Assessment

Opportunity Reference Code: USDA-USFS-SRS-2023-0357A

Organization U.S. Department of Agriculture (USDA)

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A complete application package consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations. At least one recommendation must be submitted in order for the mentor to view your application.

All documents must be in English or include an official English translation.

Application Deadline 1/5/2024 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.

USFS Office/Lab and Location: A research opportunity is available with the U.S. Department of Agriculture (USDA) Forest Service (USFS), Southern Research Station, located in the US Forest Products Laboratory in Madison, Wisconsin.

At the heart of the U.S. Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and grasslands for present and future generations. Why? Because their stewardship work supports nature in sustaining life. This is the purpose that drives the agency's mission and motivates their work across the agency. It's been there from the agency's very beginning, and it still drives them. To advance the mission and serve their purpose, the U.S. Forest Service balances the short and long-term needs of people and nature by: working in collaboration with communities and our partners; providing access to resources and experiences that promote economic, ecological, and social vitality; connecting people to the land and one another; and delivering world-class science, technology and land management.

Research Project: Mill residues are the byproduct of the primary woodmilling process that includes bark, sawdust, wood chips, slabs, edgings, trimmings, cores, veneer clippings, hog fuel, and pulp screenings as well as unused wood waste. This residue can be used for various purposes such as onsite bioenergy, nonstructural panels, mulch, or animal bedding. Quantifying mill residues is crucial for sustainable resource management and assessing the potential uses of the residue and minimizing waste. Forest Inventory Analysis (FIA) has five classifications



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for residues (though not all regions use all classifications): bark, coarse, fine (shavings), fine (sawdust), and whole log chipped. The study objective is to improve understanding of HWP dynamics and estimate changes in response to modeled policies and practices.

This study has three related components:

- Develop a methodology for quantifying mill residue production at different stages of the woodmilling process.
- Estimate the amount and quality of mill residue produced by different sawmills in a particular region by green tons or thousand ft.
- Analyze the potential uses of sawmill residue and their economic and environmental impacts.

The selected participant will be collaborating with USDA Forest Service (FS) scientists to assemble, interpret and help disseminate data and information to provide options quantifying mill residue and the economic and environmental impacts. In particular, the participant will interact with scientists at the USDA FS Forest Products Laboratory (also the University of Wisconsin community), who encompass a wide variety of disciplines. Under guidance of the mentor, the participant will also assemble technical information, perform analyses, contribute to technical reports, and provide co-leadership in writing peer-reviewed journal papers and other outlets.

Learning Objectives: Under guidance of the mentor, the participant will:

- Learn about the USFS Timber Product Output study to estimate roundwood production and uses in the US while helping integrate better data and modelling into USFS planning and projects.
- Gain first-hand knowledge of Forest Service Research & Development science and the Forest Inventory and Analysis program.
- Understand and facilitate interactions at the intersection between science and land management.

The participant will have the opportunity to interact with scientists in other Forest Service research stations, Forest Inventory and Analysis researchers, other land management agencies, roundwood mill managers, and others in the forestry supply chain. The participant may explore options for future career or educational opportunities and take advantage of additional training opportunities.

Mentor: The mentor for this opportunity is Julie Ballweg (julie.ballweg@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: December 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year but may be extended upon recommendation of USFS and is contingent on the availability of funds.

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Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The current stipend for this opportunity is equal to \$60,000 per year.**

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details](#) page of the program website for information about the valid immigration statuses that are acceptable for program participation.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and USFS. Participants do not become employees of USDA, USFS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process please email ORISE.USFS.SRS@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in one of the relevant fields. Degree must have been received within the past five years.

Preferred Skills:

- Experience with forest resource activities and knowledge of the sawmilling process including the issues surrounding sawmilling process
- Interest in the forestry supply chain
- Experience with supply chain modeling is desired, GAMS preferred
- Experience with LCA modeling software, SimaPro preferred
- A record of publishing scientific articles in peer-reviewed journals, including on the following topics related to supply chain, LCA, and harvested wood products; primary author preferred
- Ability to write clearly and effectively for technical and non-technical audiences
- Strong presentation skills and the ability to communicate highly technical information to non-technical audiences
- Ability to effectively synthesize scientific information
- Valid US Drivers License or ability to obtain one within 3 months of hire







Point of Contact [Justina](#)

Eligibility Requirements • **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.

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- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([1](#) )
 - **Computer, Information, and Data Sciences** ([2](#) )
 - **Earth and Geosciences** ([1](#) )
 - **Engineering** ([2](#) )
 - **Environmental and Marine Sciences** ([5](#) )
 - **Mathematics and Statistics** ([4](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).