

Opportunity Title: USFS Postdoctoral Fellowships in Ecosystem Valuation **Opportunity Reference Code:** USDA-USFS-RMRS-2023-0425

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-USFS-RMRS-2023-0425

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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 <u>Here</u> for detailed information about acceptable transcripts.
- A current resume/CV
- A job market paper
- 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 12/22/2023 11:59:00 PM Eastern Time Zone

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

USFS Office/Lab and Location: Postdoctoral research appointments are available with Dr. Travis Warziniack at the U.S. Department of Agriculture (USDA) Forest Service's (USFS) Rocky Mountain Research Station (RMRS), located on the campus of Colorado State University in Fort Collins, Colorado.

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.

The Warziniack Lab is a world leader in research related to valuation of ecosystem services. The lab's research contributes directly to national and international efforts to develop natural capital accounting methods and statistics, national climate change assessments, and guides management of the nation's forests. Its research aims to better understand links between human and ecological systems and provide the science necessary to better steward natural resources, with an emphasis on water and watershed health, by:

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- 1. Developing and maintaining state of the art models of integrated human-natural systems,
- 2. Developing nationally consistent data for ecosystem services that can be applied at a broad range of spatial scales,
- 3. Identifying key risks to ecosystem services, ways to mitigate those risks, and ways to adapt to negative impacts,
- 4. Communicating the value of ecosystem services to key stakeholders, including the scientific community and policymakers.

Research Project: Research at the Warziniak Lab advances economic theory in valuation of natural resources, builds and maintains integrated models of economic and ecological systems, and assesses impacts of environmental change on the macroeconomy. The research relies on a variety of techniques in the economic sciences, including micro and macro theory, econometrics, general equilibrium, and computational methods.

Fellows conduct both independent and collaborative research on issues that matter, and enjoy a challenging environment in which to continue their professional careers. Selected fellows will support two main projects:

- Ecosystem valuation and natural capital accounting for forests: The Warziniack Lab leads the development of the U.S. natural capital accounts for forests and works closely with the White House and other agencies to implement the <u>National Strategy to Develop Statistics</u> for Environmental-Economic Decisions. Research assistants will conduct research with ecological and economic data to develop natural capital accounts forests and analyze the impact of forest loss, climate change, and environmental policy on the U.S. economy. Advanced students and postdocs will also be asked to help advance economic theory and build computational models of integrated economicecological systems to measure the contribution of forests to national wealth.
- Impacts of climate change on U.S. water resources and watershed health: The lab is the center for the U.S. Forest Service's <u>national</u> <u>assessment of water resources</u>. Members of the lab study water demand and supply and assess the impacts of climate and socioeconomic change on water resources, particularly water from forest and mountain systems. Research at the lab is currently focused on measuring the contribution of water from forests to local economies and assessing adaptation options due to climate change in places like the Colorado River Basin.

Fellows conduct research independently and in partnerships with scientists from diverse backgrounds and will interact with other professionals through team projects, seminars, and collaboration with peers in other agencies and academia. Fellows are asked to submit for publication in peer-reviewed academic journals and present their research to colleagues at conferences and meetings, further enhancing their professional credentials.

Learning Objectives: As a result, the fellows will gain training in advanced



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> valuation methods for ecosystem services and natural capital and learn how that valuation is applied to national statistics and federal policy.

Mentor: The mentor for this opportunity is Travis Warziniak (<u>travis.w.warziniack@usda.gov</u>). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: Spring 2024; start date is flexible.

<u>Appointment Length</u>: The appointment will initially be for one to two years, but may be extended upon recommendation of USFS and is contingent on the availability of funds.

Level of Participation: The appointment is full-time.

<u>Participant Stipend</u>: The participant will receive a monthly stipend commensurate with educational level and experience. The current monthly stipend range for this opportunity is \$6,500 -\$7,650.

<u>**Citizenship Requirements:**</u> This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR).

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 <u>Program Website</u>. After reading, if you have additional questions about the application process please email <u>ORISE.USFS.RMRS@orau.org</u> and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion before the appointment start date. Degree must have been received within the past two years.

Preferred Skills:

- Experience with data analysis software, such as R or Python, and working with geospatial data.
- Should be able to operate a vehicle and have a clean driving record.
- A variety of economic fields will be considered, including:
 - Environmental economics, natural resource, and ecological economics
 - Water economics
 - · Economics of climate change
 - Mathematical and quantitative methods
 - Public economics, public finance



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- General equilibrium modeling
- Econometrics, spatial modeling and statistics
- Regional economics
- Macroeconomics with an interest in natural resources

Eligibility • Citizenship: LPR or U.S. Citizen Requirements

• Degree: Doctoral Degree.

- Discipline(s):
 - Business (<u>11</u> 𝔹)
 - Environmental and Marine Sciences (4.)
 - Social and Behavioral Sciences (2.)