Opportunity Title: USDA-FS Software Engineering Fellowship - Wildland Fire Web Tool Development
Opportunity Reference Code: USDA-FS-PNWRS-2026-0077

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-FS-PNWRS-2026-0077

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

A complete application 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. Click here for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- 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.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

Application Deadline 5/21/2026 11:00:00 PM Eastern Time Zone

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

USDA Forest Service Office/Lab and Location: A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (FS) within the Pacific Northwest Research Station (PNWRS) located in Seattle, Washington. **Opportunity may also be remote.**

At the heart of the USDA 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 USDA 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: The fellow will be a part of development of a widely-used online wildland fire smoke modeling system that relies on the BlueSky Modeling Framework. The BlueSky Playground provides users with interactive access to fire, fuels, emissions, plume rise, and smoke

dispersion modeling capabilities. It enables users to enter basic fire information and explore modeled outcomes across a variety of scenarios, supporting applications including prescribed burn planning, wildfire operations, research, and public communication. The fellow will be a part of the ground-up rewrite of the BlueSky Playground with the goal of developing a scalable, modern, and performant system that meets the needs of an active and diverse user base. This system is used operationally today across federal, state, and academic contexts, and the redevelopment effort will directly support real-world decision making. The fellow will have the opportunity to be a contributor, while interacting closely with a team of senior software engineers and Forest Service scientists. Mentorship will be provided through regular technical discussions, informal guidance, and collaborative problem-solving, with some independent research.

The fellow's research may include, but is not limited to:

- Designing and implementing a modern software architecture for an interactive scientific modeling application
- Developing and modernizing user interface components using contemporary JavaScript frameworks, while integrating with an existing backend API that will remain largely unchanged.
- Collaborating with scientific and operational stakeholders to translate requirements into robust technical solutions
- The resulting system is expected to support a range of users, including wildfire managers, air quality professionals, researchers, and the public.

Learning Objectives:

- Gain experience writing maintainable, modern software in a scientific and operational research environment
- Gain knowledge about how to design software systems that balance usability, operational reliability, and scientific rigor
- Have the opportunity to experience the full software lifecycle, from architecture and development through documentation and maintenance
- Develop skills in a collaborative environment with interdisciplinary stakeholders, such as scientists, software engineers, and operational users

Mentor: The mentors for this opportunity are Susan O'Neill (susan.oneill1@usda.gov) and Sim Larkin (sim.larkin@usda.gov). If you have questions about the nature of the research, please contact the mentors.

Anticipated Appointment Start Date: Spring/Summer 2026. 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 USDA Forest Service and is contingent on the availability of funds.

zintellect
climb higher

Opportunity Title: USDA-FS Software Engineering Fellowship - Wildland Fire Web Tool Development
Opportunity Reference Code: USDA-FS-PNWRS-2026-0077

Level of Participation: The expectation is full time but can be part time initially.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) only.

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 USDA Forest Service. Participants do not become employees of USDA, USDA Forest Service, 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.PNWRS@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a master's degree in the one of the relevant fields.

Preferred skills include:

- Interest in scientific or environmental applications
- Experience with software with an active user base
- Familiarity with open-source development practices

Stipend $50,000.00 – $70,000.00 Yearly

Point of Contact Michele

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (2)
  - **Computer, Information, and Data Sciences** (17)
  - **Earth and Geosciences** (21)
  - **Engineering** (29)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (51)
  - **Mathematics and Statistics** (11)
  - **Physics** (16)
  - **Science & Engineering-related** (2)
  - **Social and Behavioral Sciences** (29)