

**Opportunity Title:** USGS Ecological Statistics Research and Development

**Opportunity Reference Code:** DOI-USGS-2026-75

**Organization** U.S. Department of the Interior (DOI)

**Reference Code** DOI-USGS-2026-75

**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.

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**Application Deadline** 11/30/2026 3:00:00 PM Eastern Time Zone

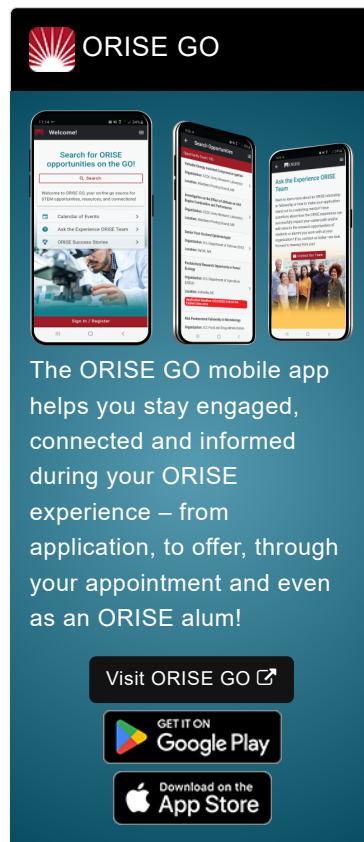
**Description** **\*Applications will be reviewed on a rolling-basis.**

**USGS Office/Lab and Location:** A research opportunity is currently available with the U.S. Geological Survey (USGS), located at Bozeman, Montana.

The USGS mission is to monitor, analyze, and predict current and evolving dynamics of complex human and natural Earth-system interactions and to deliver actionable intelligence at scales and timeframes relevant to decision makers. As the Nation's largest water, earth, and biological science and civilian mapping agency, USGS collects, monitors, analyzes, and provides science about natural resource conditions, issues, and problems.

Scientists at the [Northern Rocky Mountain Science Center](#) (NOROCK) in Bozeman, Montana conduct research on five general science research themes: 1) Biosurveillance of Biological Threats, 2) Wildlife Disease, 3) Fisheries and Water Resources, 4) Wildlife and Terrestrial Habitat, and 5) Cryosphere Science.

**Research Project:** This is an opportunity to train with the Ecological Statistics (EcoStat) team based out of the Northern Rocky Mountain Science Center in Bozeman, MT. EcoStat team led and mentored by experienced collaborative research statistician, Dr. Kathryn M. Irvine. Broadly the EcoStat team engages in applied statistical research motivated



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by ecological problems relevant to conservation and management of the nation's natural resources. Research projects are related to modeling spatial and temporally misaligned datasets in order to understand impacts of White-nose syndrome on bat species in the Western United States, research developing and testing statistical models for bat acoustic data, statistical evaluations of long-term, on-going monitoring of ecological indicators in Greater Everglades and beyond, statistical analyses for complex ecological data, and flexible, probability design creation for natural resource agencies.

Project activities include, but are not restricted to, developing and completing rigorous simulation studies to interrogate assumptions underlying statistical inferences stemming from choice of ecological model and monitoring design components, developing and testing novel statistical techniques that overcome inherent gaps in available methodology for analyzing real-world ecological data, creating transferable and reusable code with accessible documentation for practitioners, and/or visualizations of empirical and modeled results for communication with partners.

Project goals and objectives may include peer-reviewed manuscripts, collaborating on the creation and development of USGS software releases, and/or presenting novel research at professional meetings and conferences.

**Learning Objectives:** Under the guidance of a mentor, you will gain experience within a premier natural science research agency and participating in large collaborative science teams. You will learn effective strategies for communicating with diverse science domain experts with varying levels of statistical training, techniques for conveying and explaining complex statistical information for non-statistical researchers, statistical collaboration skills with federal and state agency scientists, and how to pace projects and develop achievable milestones that demonstrate effective applied statistical practice. You are expected to be trained and become highly competent in statistical and data science skills (specific to your level of education) and the ability to communicate knowledge gaps early and acquire necessary technical skills independently and efficiently.

**Mentor:** The mentor for this opportunity is Kathryn Irvine ([kirvine@usgs.gov](mailto:kirvine@usgs.gov)). If you have questions about the nature of the research please contact the mentor.

**Anticipated Appointment Start Date: December 14, 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 renewed upon recommendation of DOI and is contingent on the availability of funds.

**Level of Participation:** The appointment is full time.

**Citizenship Requirements:** This opportunity is available to U.S.

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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 USGS. Participants do not become employees of USGS, 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:** If you have questions about the application process please email [USGS@orau.org](mailto:USGS@orau.org) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should be currently pursuing or have received a master's or doctoral degree in the one of the relevant fields (e.g. Statistics or Data Science, or other related field).

**Preferred skills:**

- Experience or clear interest in ecological applications
- Foundational academic coursework in statistical techniques and inference including but not limited to mathematical statistics, probability theory, computational statistics, Bayesian modeling, zero-inflated ecological models, spatio-temporal modeling, probabilistic sampling, hierarchical modeling, multivariate statistics
- Data science skills related to large spatial and temporal datasets such as data management, QA/QC approaches, and creating and conceiving meaningful visualizations
- Technical skills may include some combination of R and/or Python, competency with reproducible documents (e.g., quarto), experience working with collaborative coding platforms (e.g., git), probabilistic programming languages (e.g., Stan, Nimble), and/or high-performance computing experience
- Effective verbal and written communication skills, self-motivated
- Ability to maintain professionalism and consistent high-quality effort under changing deadlines and project directions within collaborative research environments

**Stipend** \$66,000.00 – \$85,000.00 Yearly

**Point of Contact** [Rachel](#)

- Eligibility**
- **Degree:** Master's Degree or Doctoral Degree.
- Requirements**
- **Discipline(s):**
    - **Computer, Information, and Data Sciences** ([4](#) 👁)
    - **Environmental and Marine Sciences** ([14](#) 👁)

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- **Life Health and Medical Sciences** ([5](#) 👁)
- **Mathematics and Statistics** ([2](#) 👁)