

Opportunity Title: Physical Science Research Opportunity - Great Plains

Agroclimate and Natural Resources Research Unit

Opportunity Reference Code: ARS-GPANRRU-2015-0110-01

Organization U.S. Department of Agriculture (USDA)

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How to Apply 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. Proof must be sent to ORISE directly from the academic institution including graduation date and degree awarded.
- A current resume/CV

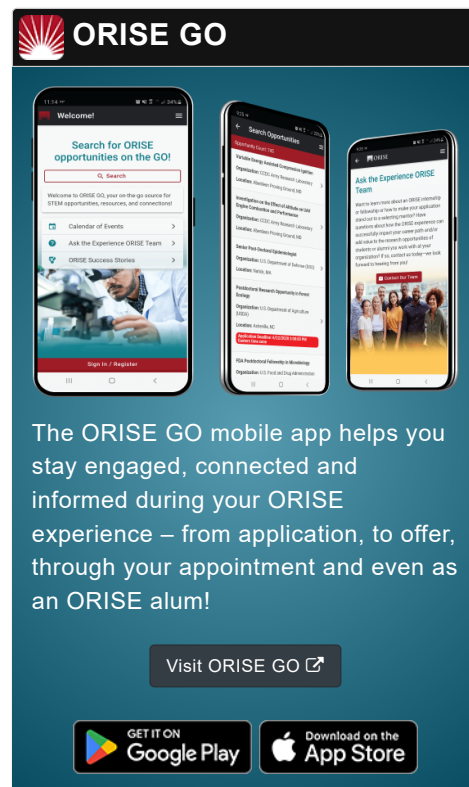
If you have questions, send an email to USDA-ARS@orau.org. Please include the reference code for this opportunity in your email.

Description A physical science research opportunity is available with the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) Great Plains Agroclimate and Natural Resources Research Unit (GPANRRU) in El Reno, Oklahoma.

The selected applicant will serve as a member of a team conducting research spanning multiple disciplines that requires unconventional approaches to qualify impacts of conservation practices on water quality from field to watershed scales (e.g. >250 mi²). S/he will assist with research in a series of interrelated projects linked across plot, field, and watershed scales that address impacts of agricultural practices on the environment: field, laboratory, and modeling. S/he will participate as a team member with the scientist in all phases of the research process and assumes full technical and operational responsibility for specific phases of the research, and provide input into the initial planning of experiments.

Additionally, the selected applicant will:

- Independently develop or design various aspects of research projects on the basis of overall objectives outlined by the supervisor.
- Contribute to the planning of various steps in experiment or project and to interpretation and documentation of findings.
- Select appropriate methods and procedures for carrying the project plan to completion.
- Operate and maintain a variety of highly specialized complex equipment which must be calibrated and synchronized to achieve desired results.
- Develop various procedures, devises new or improved



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- methods or designs specialized equipment.
- Perform highly complex techniques with unusual skill.
- Determine the kinds and frequency of tests, observations, etc., to be made and the amount of data to be recorded.
- Interpret and document findings by preparing information to be included in manuscripts or preparing reports summarizing progress or results of research.
- Keep exact, detailed records of experimental data. Tabulate, statistically analyze and summarize data using personal computers and software packages.
- Search for literature pertinent to area of research for new procedures or techniques to use in the laboratory.
- Collect, prepare, evaluate and verify samples and supporting records. Maintain records and locate and compile data and other information from various sources.
- Maintain inventory of chemicals, prepares solutions and reagents for use in the laboratory, and safely disposes of waste material (both chemical and biological).

The appointment is full-time for one year and may be renewed based upon recommendation of the ARS and availability of funding. The selected applicant will receive a stipend as support for their living and other expenses during this appointment.

Stipend rates are determined by ARS officials, and are based on the applicant's academic and professional background. The participant must show proof of health and medical insurance.

Health insurance can be obtained through ORISE. **The participant does not become an employee of ARS or ORISE.**

While participants will not enter into an employment relationship with ARS, this position requires a pre-employment check and a full background investigation.

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.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, sex, religion, national origin, mental or physical disability, genetic information, sexual orientation, or covered veteran's status.

For more information about the ARS Research Participation Program, please visit the [Program Website](#).

Qualifications To be eligible, candidates must have received a degree in Agricultural Science, Physical Science, Soil Science, Hydrology, or a closely related field.

Preferred skills include:






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- Ability to manipulate data in worksheets such as Excel and databases such as Access in order to record, organize and tabulate experimental data.
- Knowledge of hydrology, soil science, and environmental science.
- Experience or skills in field sampling of soil or plants such as determinations of plant leaf area, biomass, and composition; soil bulk density, soil texture using hydrometers, collected soil moisture data using neutron probes or other methods, or has demonstrated ability to collect other environmental samples such as water quality samples.
- Knowledge of environmental/or numerical modeling related to hydrologic, plant growth, or grazing.
- Skill in using geographical information systems.
- Skills in Campbell's data loggers, weather stations, and other electronic data collection equipment.

Eligibility Requirements

- **Degree:** Associate's Degree, Bachelor's Degree, or Master's Degree.
- **Academic Level(s):** Post-Bachelor's or Post-Master's.
- **Discipline(s):**
 - **Communications and Graphics Design** (1 )
 - **Computer, Information, and Data Sciences** (1 )
 - **Earth and Geosciences** (2 )
 - **Engineering** (3 )
 - **Environmental and Marine Sciences** (3 )